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RICHARD H. EDMONDS,
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C. R. MARCHANT, Business Manager.

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During the decade ending with 1900 the total output of agriculture, manufactures and mining in the South will aggregate about \$10,000,000,000 more than for the decade ending with 1890, or, in other words, this decade will show an average increase in the total value of all Southern products of about \$1,000,000,000 a year over the preceding decade. This looks like an enormous gain, and so it is; but when we contrast the vast increase in mining, manufacturing and agriculture in the South since 1880 we can see that it is by no means an overestimate.

Room for Expanding Growth.

The South is making amazing progress in its industrial upbuilding, and the attention which this is attracting may lead some to think that there must soon come a limit to this growth. Should this idea occur to any readers of the Manufacturers' Record it might be well for him to study the matter a little and he will then see how unlimited is the field for expansion. He might remember, as the Manufacturers' Record has often said, that Pennsylvania alone has more manufacturing than the whole South; that the South, notwithstanding its rapid cotton-mill building, consumes only one-eighth to one-ninth of its own cotton crop; that the South, despite its coal and iron ore resources, produces only about one-fifth of the pig iron output of the country, and that its entire manufacturing product is but 10 per cent. of the total of the country. Thus the South may double and quadruple its entire manufacturing interests before it attains to the volume of manufacturing of the country, and while the South is doing this other sections will, with equal vigor, be pressing forward their industrial advancement. This country cannot stand still. It is moving forward with tremendous momentum, and no one need fear that there will not be room enough for all the industrial growth which the South can make, even should the growth be on a far greater scale than we have seen in the past.

1895-1896.

The year just ended has been one which for all time to come will be noted in the records of Southern progress as one of the most important periods in the business history of the South. Looking back over 1895 we can see that for the South it has been a year of marvelous achievement. When the general business depression, which has existed throughout the world for several years, is taken into account, it will be realized that the South accomplished wonderful things during 1895. It was a year free from speculative activity and a year in which there was no hurrah or booming business seen in any part of the South; but in all this great territory there has been a solid, substantial foundation laid for greater growth than was ever before seen in the South, if not in any other part of the country.

Standing out conspicuously in history will be the Atlanta Exposition and the results which must necessarily flow from that undertaking. As the Manufacturers' Record has so often said, the greatest good from the exposition will not be in the heavy investments of capital and the incoming of thousands of settlers as a result of it, but of more value even than these will be the stimulation into increased activity of the people of the entire South. Quickened into a livelier realization of the unequalled opportunities which their section affords, stimulated by what has been accomplished in Atlanta and elsewhere, the effect of the exposition will be to double, possibly quadruple, the aggregate energy displayed in the active upbuilding of the whole South by the people of the South. The broadening influence of such an exposition upon the people of this section, the educational effect which it has already had, cannot be measured; and when to this is added the mighty influence of the exposition upon our entire country, its effect in broadening the patriotism of the whole country, of bringing all sections into closer harmony and demonstrating more fully than has ever been done before that this is indeed one country, with one aim and one object before its entire people, language fails to tell of the value, not to the South only, but to the United States, of Atlanta's great work. It marks not simply a new period from which the industrial history of the South must henceforth date, but it marks a new period in a broader spirit of patriotism for our entire land.

During 1895 the general industrial expansion of the South made solid and substantial advance. The revival of the iron business put into operation many idle furnaces, made a heavy increase in the output of coal and iron ore, and at the close of the year the production of iron and the output of coal is at a heavier rate than at any former time in the history of the South. With all of its iron and kindred interests on a basis now acknowledged throughout the world of the most solid

and enduring character, the future of these industries in the South is far more promising than during the boom period of a few years past, when the world at large had not comprehended the magnitude and the solidity of the metallurgical interests of the South. There has been a steady diversification of the iron business, and Southern furnaces are finding an ever-increasing home market for their pig iron. During the year Alabama furnaces made heavy sales of basic iron to the steel-making concerns of the North and West, thus demonstrating beyond question the possibility of the production of steel-making iron in the South. A large number of plants, which had been idle for several years, have gone into operation during the last twelve months, some having been started up by their former owners, some having passed into the hands of new and strong concerns, which secured large properties at prices which promise very liberal returns. At the close of the year arrangements are being completed for blowing in several other furnaces, which have been undergoing repairs, and in the early part of the new year the already heavy production of iron in the South will be materially increased.

Probably the most important event in the industrial history of the South for many years was the award to a Southern shipbuilding concern of a contract for two battleships to cost \$4,500,000. Nothing which has occurred, excepting the Atlanta Exposition, has more fully emphasized the growing power of the South in the business interests of the country. Throughout all parts of the United States this contract has commanded the widest attention, and the leading papers of America have used it as an illustration of the wonderful increase of the South's industrial interests and of the commanding power of Southern enterprises in being able to underbid for a contract of this character the most noted shipbuilders of the United States. As stated elsewhere in this issue, with this contract the Newport News ship-yard now has on hand an aggregate of over \$7,000,000 worth of work—an amount which might justly be regarded as of great magnitude for even such a concern as the Cramp Shipbuilding Company.

Cotton-mill building made greater progress in the South during 1895 than ever before. The aggregate number of spindles for new mills undertaken during the year, and for enlargements of old mills, was, in round numbers, about 1,000,000, or probably twice as great as ever before recorded in one year. The activity in mill building was almost phenomenal, commanding the widest attention, not only in the South and New England, but also in Great Britain. During the year the South's pre-eminent advantages for this industry were for the first time fully and completely admitted by the foremost textile authorities of the world. Several of the oldest and largest cotton-mill companies of New England, after the most careful investigation, decided

that all future extensions of their business ought to be made in the South, and immediately commenced the construction of large mills costing, in one case, \$500,000, in another \$600,000, and at the present time investigations are being made with a view to building mills by a number of other New England concerns. It must, however, be to the credit of the South that the greatest progress made during the year in mill construction has been by its own people and with its own capital. In round numbers the South has now, including mills in operation and those under construction or for which the money has been raised, about 4,000,000 spindles in sight, all of which will be in full operation before the close of the present crop year.

The tide of population, which for a year or more has been slowly turning southward, has swelled during the past twelve months to great magnitude. It is now recognized everywhere that the predictions of the Manufacturers' Record and the Southern States magazine, made during the last few years, of a great southward movement, are soon to be fulfilled. Throughout the North and West thousands of people are turning southward, and the outlook indicates that within the next few years as many settlers from outside will come into the South as went into the Northwest fifteen or twenty years ago, when that country was being opened up to civilization. With the combination of unequalled natural resources and advantages, the work which is being done by the South in its own development, and the inflow of outside men and money, there is the assurance of a period of activity before the South such as no other part of this country has ever seen.

One of the interesting and most striking events of the year has been the interest aroused throughout the West in closer business connections with the South. The people of Chicago and other Western cities, having visited the South in large numbers and studied its opportunities, and realized something of its future, have determined to take an active part in Southern upbuilding and thus reap at least a fair share of the profits which must come from the phenomenal activity that is soon to be seen in this favored land.

The old year has wiped out many of the scars of the business disasters following the panic; it has cleared away much of the uncertainty of the past, and given the South an opportunity to demonstrate to the world the inherent soundness of all its business interests, and to prove, and have this proof everywhere accepted, that no other section of this or any other land offers such phenomenally favorable conditions for the support of a great population, the development of industrial interests and the creation of wealth. In brief, such has been the record of 1895. The new year opens with every assurance that despite the uncertainty which overhangs the country, because of financial affairs and of the Venezuelan situa-

tion, the South at least will move steadily forward and in 1896 will show even greater advancement than its record for 1895.

From the Construction Department of the Manufacturers' Record we have compiled, as usual, the summary of new industries projected during the year. The total for 1895, as shown in the detailed list below, was 3097 new enterprises, against 2829 in 1894 and 2293 in 1893. It will be noted that the most marked increase was in cotton mills, cotton compresses and cottonseed-oil mills, other enterprises showing comparatively few material changes. The number of cotton mills projected increased from forty-four in 1894 to 167 in 1895; the number of cotton compresses from twelve to thirty-two, and of cottonseed-oil mills from fifteen to thirty-eight.

The following summary shows the number of enterprises reported for the three years:

Industries.	Total. 1893.	Total. 1894.	Total. 1895.
Iron furnaces.....	1	..	2
Mch. shops & foundries.....	65	72	71
Stove foundries.....	2	2	1
Miscel. iron & steel wks.....	25	42	33
Woodworking establish- ments.....	531	504	396
Furniture factories.....	25	16	22
Carriage and wagon factories.....	14	13	9
Agricultural implement works.....	14	8	7
Mining and quarrying companies.....	224	246	237
Flour mills.....	89	107	103
Textile mills.....	90	44	167
Cotton compresses.....	19	12	32
Cottonseed-oil mills.....	59	15	38
Brick works.....	60	32	50
Canning factories.....	95	65	55
Ice factories.....	57	73	78
Electric-light & power plants.....	82	130	119
Gas works.....	10	8	10
Water works.....	62	98	85
Miscellaneous not in above.....	779	1342	1582
Total.....	2293	2829	3097

Business for 1895 in the South.

The issue of Bradstreet's for the last week of 1895 contains some interesting figures relative to failures in the United States during the year, in which the commercial standing of the South makes a very creditable showing. In the thirteen States and the District of Columbia the number of failures were 2185, while in the seven Western States of Ohio, Indiana, Illinois, Missouri, Michigan, Kansas and Colorado the number was 3041, or 856 more than in the South. The assets of insolvent firms in this section aggregated \$10,630,530 less than the liabilities, while in the other group this amount was \$13,626,254. In other words, the excess of liabilities over assets in this Western group was over 25 per cent. more than in the South.

Another interesting feature shown by the summary is contained in the appended table:

States.	No. of failures. 1895.	1894.	
New England.....	1686	1784	98 dec.
Middle.....	3082	3018	64 inc.
Western.....	3041	2688	353 inc.
Southern.....	2185	2202	17 dec.
Pacific.....	1180	1182	2 dec.

Next to the New England States the South had the greatest decrease in the number of failures. The assets shown by insolvent firms in 1895 were \$14,181,409, an increase of \$2,500,000 over the assets of 1894. In New England the excess of assets in 1895 over 1894 was about \$1,200,000, in the Western States about \$2,000,000 and in the Pacific group about \$400,000. In the Middle States the assets of 1895 were about \$750,000 less than in 1894.

These figures show that the South

has suffered less commercially during 1895 than any other section of the country, although the Bradstreet's summary goes to show that during the year the greatest number of failures occurred in the history of its records, with one exception—that of 1893. The South's record for the last six years is also interesting as compared with other groups of States. The number of failures this year, 2185, is the smallest of the series, except 1892 (1915) and 1890 (1655). In decided contrast is the record of the Western group, in which the number for 1895 is the largest of all, except 1893, when it reached the startling figures of 4371, the greatest number of failures ever recorded in any one section of the country. In the Northwest the number in 1895 is the largest, but one, for the five years. In the Middle States it is the largest, but one, and in the Pacific States the largest, with two exceptions.

To sum it all up, the compilation seems to indicate that there is a steady and healthy growth of Southern business enterprises which is without parallel elsewhere in the country.

The Money Question.

President Cleveland has done the country a very great service in calling its attention to the imperative necessity of immediate action to compose the finances of the country. This we say with no disposition or purpose to discuss his recommendation. They are before Congress, which will take such action as the two Houses may agree upon after the matter has been thoroughly discussed.

If there is one thing proved more conclusively than another by the experiences of the past four years, it is that the government, as it touches the people in monetary affairs in the United States Treasury, is simply a great business corporation, and cannot safely undertake to do anything concerning money and finance that it would be unsafe for any manufacturing or mercantile corporation to do. It has been conclusively shown that the government must be entirely divorced from all responsibility for supporting the banks or any other monetary institutions, and that to supervise and control them in police regulations in the interests of the people, and in absolute freedom of all responsibility for them, is the true position for the nation or for States.

In the conditions of modern civilization no great business can be carried on, however large its live or its dead capital may be, without the assistance and support of the banks and bankers of a country.

The government has a right to lean upon and must be supported by the banks, as is the case in every other country, or else the banks have no right to exist, for the people must support and defend the government, and not the government, in normal conditions, support them.

While the revenues of the government were unusually large, and the government was paying its debt off by millions every year, the weakness, and even foolishness, of the present system were not made manifest. It is now practically admitted by nearly every citizen who has had experience in such matters, and whose opinion is of value, that the government must be relieved from paying gold in "current redemption" of the \$500,000,000 of greenbacks and treasury notes.

There are only three conceivable ways of doing it:

1. By issuing \$500,000,000 of bonds and using the proceeds of their sale to retire and cancel the \$500,000,000 of such notes.

2. By increasing the revenues very largely above expenditures and using the surplus to redeem and cancel the \$500,000,000 of treasury notes and greenbacks as they are presented for redemption.

3. To make it for the interest of the banks and to cause the banks to assume all responsibility for the current redemption of the \$500,000,000 of greenbacks and treasury notes, by allowing them, proportionally as they do this, to issue circulating notes against their assets. Thus the banks, as a compensation for their charters and the control of the banking business of the country, would assume the maintaining of all forms of paper money at par with the measure of value metal. This matter is precisely what is done by the banks in every first-class nation, and it has been proved that it is the only safe way of using paper money as a substitute for coin money and at a parity with coin.

This latter is the only possible solution of the present difficulty that the people will permit. There is not a person familiar with the public sentiment who believes that the issuing of \$500,000,000 bonds and the retirement of the legal-tender and treasury notes could get one vote in twenty in Congress within the next twenty years.

The second proposition, of increasing the revenues to retire such notes, is impossible of execution, even if we had or could get the revenue. It has been tried on two occasions, and it was each time rebelled against so promptly and thoroughly that it was given up. These are the facts: On April 12, 1866, the treasurer of the United States was authorized to sell bonds and to use the proceeds to retire United States legal-tender notes, not to exceed \$10,000,000 in the first six months and not to exceed \$4,000,000 per month thereafter, until they were all retired. Under this law only \$59,000,000 were retired, but in January, 1868, the authority was repealed by a practically unanimous vote.

For the second time, January 14, 1875, similar authority was given the treasurer, but when, May 31, 1878, it was found that but \$35,000,000 had been thus retired, that authority was repealed also. Were Congress to enact a similar bill today almost every member of Congress who should vote for it would lose his seat unless he should consent to its repeal within the next six months.

It seems, therefore, that we are shut up to the single expedient of having the banks, instead of the United States Treasury, responsible for the redemption of every form of paper money. It seems to be the duty of the banks of the country, under the circumstances, to come forward with some proposition indicating their willingness to assume the same duties and responsibilities that rest upon the bankers of every other country in return for some concessions that will amply compensate them for so doing.

To what association of bankers, united in a clearing house, or to what bankers in any section of the country, can we look to draw a bill and submit it to the Secretary of the Treasury for his approval and submission to Congress for action that will solve the problem and that Congress will pass?

The duty seems to rest upon the bankers above every other class in the community. Will they come to the rescue of the United States Treasury and of the people, with the eminently wise sug-

gestions which they are abundantly able to make, in the form of a bill that will do the thing desired?

Here is an opportunity for practical and patriotic financiers outside of legislative halls to prove themselves wise and discreet. The Manufacturers' Record will be glad to hear from practical men on the subject that is now pending in Congress and being discussed, not only there and in the newspapers, but by practical men in all parts of the country. The Congressional mind is apparently engaged upon the problem of constructing a bridge over a temporary emergency.

The great need and anxiety of the country is to have Congress adopt a measure that none will seriously antagonize, that will remove present troubles and make their recurrence impossible. We have in the foregoing shown that there are two propositions that will never receive popular approval. The third is respectfully submitted to the candid and thoughtful consideration of our readers.

Furnaces as Freight Creators.

Some time ago the Manufacturers' Record, to illustrate the freight-creating powers of an iron furnace, said that the iron-making town of Bessemer, Ala., developed a larger volume of freight than the entire cotton crop of the South. This statement seems to have amazed some of our friends and has called forth an enquiry as to its correctness. The Bessemer Land & Improvement Co. has furnished the Manufacturers' Record the following summary of freight daily handled at that town: Iron ore, 2250 tons; coke, 1350 tons; rock, 450 tons; coal, 2200 tons; pig iron, 900 tons; cast pipe, 200 tons; pipe supplies, 450 tons; sundries, 100 tons—total, 7900 tons a day. This, of course, represents the haul to the furnaces of the ore, coke and limestone and the haul away of the pig iron. Here is a total of 7900 tons of freight handled daily at Bessemer, or an aggregate, counting only 300 days a year, though the furnaces really run 365 days, of 2,870,000 tons a year. Eight million bales of cotton, a full average crop, furnish 2,000,000 tons of freight. The Manufacturers' Record usually knows whereof it speaks when it makes statements regarding the South.

A Great Advertisement for the South.

With the contract for the two battleships received by the Newport News Shipbuilding & Dry Dock Co., that company now has under contract eight vessels, the aggregate cost of construction of which will be nearly \$7,000,000. This is probably by far the largest aggregate amount of work which any manufacturing concern in the South has ever before had at one time. This includes the two battleships, three gunboats now nearing completion, two large merchant vessels and a pilot boat to be built for the Pensacola pilots, the contract for the construction of this having been just made. The company has a large amount of other work in view, which will probably materialize in the near future unless financial conditions should upset present plans. The Manufacturers' Record learns that early in the year the company will have over 2500 men at work, and that this will be increased during the next six months to over 3000.

The influence of this will materially affect the whole South. Commenting on the facts relating to this contract as given in the last issue of the Manufac-

turers' Record, the Chicago Inter-Ocean says:

A saving of \$1,000,000 has been effected by the award of contract for construction of two new battleships to the Newport News Shipbuilding & Dry Dock Co. This Southern firm underbid the famous shipbuilders of San Francisco and Philadelphia by something near to half a million on each vessel. It will be one of the curiosities of history that Newport News, near to which the first and almost the only great disaster to the Union navy occurred, was converted into a site for the construction of national war vessels when the reunited and reconsolidated North and South were preparing for resistance to foreign aggression.

But the most interesting feature of the incident is that which indicates the growth of manufacturing enterprise in the South. * * * In some form or other, 75 per cent. of the contract price will find its way into the pockets of mechanics and laborers.

The result ought to be a revival of Southern interest in protection to American industries, which are the sources of the wage fund, which is the chief factor of purchasing power in the home market. This notable Southern victory in the field of industry ought to inspire the people of that section with new zeal.

Mr. C. W. Wilcox, No. 73 Woodside avenue, Chicago, desires to become interested in the publication of a weekly paper in some prosperous Southern town of 15,000 to 30,000 population.

Southern Coal to Italy.

The Davis Coal & Coke Co., of West Virginia, recently made a shipment from Baltimore to Genoa, Italy, of 977 tons of coal and forty tons of coke. This is the beginning of what may develop into an extensive trade with the Italian ports. At present the coal operators of Cardiff, Wales, have a monopoly of this business, and it is so extensive that a fleet of fifteen or sixteen large vessels is reported as constantly in service between Genoa, Naples, Leghorn and other Mediterranean cities and Cardiff. While the distance from the United States to this market is fully 4000 miles, about 2200 miles more than from the Welsh collieries, the marble and other goods from Italy which are in demand in America constitute such an item in freight shipments that if the owners of vessels bringing these goods can secure return cargoes from Baltimore, they will be justified in continuing to furnish freight room for coal. We understand that the recent shipment of coal was made at a freight rate of \$2.25 per ton from Baltimore wharves. As soft coal is used extensively in the Italian arsenals, in factories and for the warships of the Italian navy, this market is a most important one for American companies to reach if possible.

For some months past Mr. John Fulton, of Pennsylvania, has been in and around Talladega, Ala., representing, it is said, Messrs. Ladenburg, Thallman & Co., of New York, who, it is reported, are figuring on a considerable combination of iron interests in Alabama. It is claimed that the Talladega furnace will be put into blast by this firm or by a company formed by it, and that the same combination will probably include the furnace at Cedartown, Ga., and also the East & West Railroad. These furnaces are located in a very rich ore section, and the East & West Railroad runs through a country of remarkable agricultural and mineral resources. It has, however, been of little value to the country tributary to it, because of the lack of enterprise in furnishing facilities for the handling of freight, and in its operations it has, so it is claimed, given but little consideration to the development of the country along its line. Should this road pass into strong hands and be developed and practically rebuilt, and the iron furnaces at Talladega and Cedartown be put into operation, a very marked change in that section of country would be the outcome.

FINANCIAL NEWS.

Disbursements for 1895.

The following is a list of dividend and interest disbursements of Southern corporations for 1895 so far as reported, not including those referred to in the last issue of the Manufacturers' Record:

Maryland.

Baltimore: George's Creek Coal & Iron Co., \$3 per share, semi-annual.
Drovers and Mechanics' National Bank, 3 per cent., semi-annual.
American National Bank, 2½ per cent., semi-annual.
Northern Central Railway Co., 4 per cent., semi-annual.
Manufacturers' National Bank, 2½ per cent., semi-annual.
Alabama Home Building and Loan Association, 3 per cent., semi-annual.
National Mechanics' Bank, 4 per cent., semi-annual.
Citizens' National Bank, 5 per cent., semi-annual.
Farmers and Planters' National Bank, 5 per cent., semi-annual.
Peabody Fire Insurance Co., 5 per cent., semi-annual.
Border State Savings Bank, 1 per cent. (extra).
Atlantic & George's Creek Coal Co., five cents per share.
National Exchange Bank, 3 per cent., semi-annual.
Cumberland: Second National Bank, 6 per cent., semi-annual.

Virginia.

Roanoke: National Exchange Bank, 3 per cent., semi-annual.
First National Bank, 3 per cent., semi-annual.
Richmond: Indorsement Guarantee Co., 4 per cent., semi-annual.
Virginia Trust Co., 3 per cent., semi-annual.
Security Bank, 3 per cent., semi-annual.
Richmond Building, Loan & Trust Co., 5 per cent., semi-annual.
Virginia Fire & Marine Insurance Co., 4 per cent., semi-annual.
Merchants' National Bank, 3½ per cent., semi-annual.
Granite Building Co., 4 per cent., semi-annual.
First National Bank, 5 per cent., semi-annual.
City Bank, 3 per cent., semi-annual.
Merchants & Mechanics' Building Fund Co., 7 per cent., annual.
Old Dominion Building and Loan Association, 3 per cent., semi-annual.
Mutual Guarantee Building and Loan Association, 3½ and 5 per cent., semi-annual.
Virginia-Carolina Chemical Co., 2 per cent., quarterly.
Union Bank, 3 per cent., semi-annual.
Savings Bank of Richmond, 3 per cent., semi-annual.
State Bank of Virginia, 3½ per cent., semi-annual.
National Bank of Virginia, 3 per cent., semi-annual.
Virginia State Insurance Co.
State Building & Loan Co., 3 and 4 per cent., semi-annual.
Planters' National Bank, 5 per cent., semi-annual.
Lynchburg: National Exchange Bank, 3 per cent., semi-annual.
Traders' Bank, 2 per cent., tri-annual.
Commercial Bank, 3 per cent., semi-annual.
Bedford City: First National Bank, 4 per cent., semi-annual.

South Carolina.

Charleston: People's National Bank, \$5 per share.
City Railway Co., \$2 per share.
Columbia Beneficial Association, final dividend.

Alabama.

Florence: Merchants' Bank, 5 per cent., semi-annual.

Georgia.

Columbus National Bank, \$5 per share, semi-annual.
Columbus Loan Association, 8 per cent., annual.
Augusta National Bank, 3½ per cent., semi-annual.
Valdosta: Industrial dividends, annual, \$60,000.
Savannah: Georgia Southwestern Railroad Co., \$10.80 per share.
Chatham Bank, 3 per cent., semi-annual.

Kentucky.

Louisville: Germania Trust Co., 3 per cent., semi-annual.
Columbia Finance & Trust Co., 2 per cent., quarterly.

Louisiana.

New Orleans: Canal & Banking Co., \$55.50 per share.
New Orleans National Bank, \$15 per share.
State National Bank, \$3 per share, semi-annual.
Hibernia National Bank, \$4 per share, semi-annual.
Union National Bank, \$3 per share, semi-annual.
Jefferson City Gas Light Co., \$2.50 per share, semi-annual.

North Carolina.

Kinston Warehouse Co., 6 per cent.
Wilmington: Savings & Trust Co., 2½ per cent., semi-annual.
Atlantic National Bank, 3 per cent., semi-annual.

Miscellaneous.

National Metropolitan Bank, Washington, 5 per cent., semi-annual.
Pensacola: Florida Savings Association, 5 per cent., for five months.

Interest Payments.

Bonds guaranteed by city of Baltimore:
City Hall 6s 1900.....\$15,000 00
City Hall 6s 1902..... 7,500 00
Funding 6s 1900..... 12,000 00
Western Maryland 3½s 1927..... 27,630 00
Consolidated 3½s 1930..... 87,500 00
Patterson Park extension 4s 1920..... 2,000 00
Harford Run improvement 4s 1920..... 5,000 00
Harford Run completion 4s 1904..... 7,000 00
Western Maryland R. R. 6s 1902..... 30,000 00
Western Md. R. R. 6s reg. bonds..... 10,410 00
Western Md. R. R. 6s coup. bonds..... 15,840 00
Western Maryland R. R. 4s 1925..... 13,680 00
Internal Improvement 3½s 1928..... 84,875 00
Public Improvement 3½s 1940..... 64,442 00
State of Maryland stock:
3.65 per cent. defense redemption loan (semi-annually), chapter 289 of 1882 (\$3,000,000).....\$54,750 00
3 per cent. exchange loan (\$1,898,829.10), chapter 449 of 1886, semi-annually..... 28,482 43
3 per cent. exchange (semi-annually), chapter 305 of 1890 (\$706,757.14)..... 10,601 35
State of Maryland bonds:
3 per cent. exchange loan, 1889 (\$3,079,400), semi-annually.....\$46,191 00
Brush Electric Light Co., of Baltimore, January coupons.

Coupons payable by Mercantile Trust & Deposit Co., of Baltimore: Georgia, Carolina & Northern Railway 5s, Seaboard & Roanoke Railroad first 5s, Raleigh & Gaston Railroad Co. first 8s, Raleigh & Augusta Railroad Co. first 6s, Georgia Southern & Florida Railway Co. first 5s, Baltimore & Ohio Railroad Car Trust 4½s, Redemption Baltimore & Ohio Railroad Car Trust 4½s, series I, Aberdeen & West End Railroad first 6s, United States Electric Light & Power Co. first 6s, Wytheville (Va.) Electric Plant 6s, Columbus Water Co. 6s, Monticello Distilling Co. first 6s, College of Physicians and Surgeons 6s, Salisbury Water Co. 5s, National Brewing Co. first 6s, Redemption National Brewing Co. first 6s, Security Mortgage & Trust Co., of Dallas (Texas) 6s, City of Raleigh 5s, City of Radford 6s, Shreveport Gas, Electric Light & Power Co. first 7s, George W. Collier mortgage 6s, City of Asheville 5s and 6s, City of Petersburg 5s, City of Staunton 6s, City of Staunton 8s, Redemption City of Staunton 6s, City of Charlottesville 6s, water bonds.

Coupons payable at the Safe Deposit & Trust Co., of Baltimore: Monongahela Gas Coal Co., Wilmington & Weldon Railroad Co., Brush Electric Co., Florence Railroad Co., Manchester & Augusta Railroad Co., West Virginia Central & Pittsburgh Railway 6s, Baltimore Traction Co. 6s, Consolidated Gas Co., of Baltimore, bond coupons, Orleans Railroad Co., New Orleans, La., January coupons, New Orleans & Western Railway Co. coupons, City of Charleston (S. C.) 4 per cents, State of South Carolina Brown and Blue bond coupons, City Railway Co., of Charleston, January coupons, Enterprise Railroad Co., of Charleston, January coupons.

New Corporations.

F. Bander, of Darien, Ga., is preparing to start a bank at Fitzgerald, Ga., the new colony town.

J. W. Castles, John T. Gibbons and others have formed the Hibernia Insurance Co. at New Orleans with \$200,000 capital.

The Marion (N. C.) Bank has been organized and will begin business about

February 1. The officers are B. B. Price, president; Dr. George I. White, cashier.

New Securities.

The city of Wilson, N. C., will sell \$17,000 in 6 per cent. 20-year gold bonds for improvements. Hon. J. F. Bruton is mayor.

Master Car Builders' Convention.

The next conventions of the Master Car Builders and Master Mechanics' Association will be held at Congress Hall, Saratoga Springs, N. Y., June 17 and 24, inclusive.

It is the wish of the joint committee of the associations that a very complete exhibition be made of all goods and devices used in their respective departments, particularly new and improved machinery, and especially air compressors, pneumatic lifts and tools.

In order that such may be shown to the best advantage, it has been decided to furnish, free of charge to the exhibitor, steam, compressed air and power, and it is very desirable that those intending to make exhibit apply for space as early as possible.

The standing committee has contracted with Congress Hall for accommodations for supply men at following rate: Single room, \$3 per day; double room, one person, \$4 per day; double room, two persons, each \$3 per day.

Exhibitors may have space reserved by applying to W. C. Ford, secretary of the standing committee, rooms Nos. 19 and 29, Broadway, New York city.

Orange Crop in Florida.

Mr. H. B. Plant, president of the Plant Railway & Steamship Co., has just returned from a trip to the orange-growing districts of Florida. In a recent interview he is quoted as saying that many groves supposed to be killed by the frost are now in bearing. In the interview he expressed himself as follows:

"The truth is the orange groves of central Florida, which were well taken care of, have suffered but little from the cold wave. The frost that killed many of the orange trees a year ago was the first disastrous frost we have had in that region of the State for thirty-two years. There will probably not be another such frost for many years to come. But with all this there will be a fair crop of oranges grown in Florida this year. Of course, the yield will not be shown on the market as abundantly as it has been for a number of years past, and, of course, the scarcity of oranges in the market will make the price go up to some degree, but at the same time there will not be such a loss to the public as will be naturally anticipated after all the stories that have been published in the newspapers of the Northern market centres.

"There is one pleasing observation to make concerning the disaster which befell the farmers of Florida last year, and that is, that the cold wave which killed their orange crop groves has taught them the lesson of diversified crops, and they are now busy with the truck farms, growing such things as tomatoes, cabbage, beans and many such things which find a ready market in the Eastern and Northwestern cities long before there is the slightest evidence of verdure in the rural districts of these sections.

"I believe that this cold wave will serve a blessing in disguise to many of the farmers of Florida. Perhaps they may never have such a killing frost again, but at the same time they are making money on other crops and are not dependent on the orange groves and sunshine entirely."

If you wish to keep posted on the progress of the South, read the Manufacturers' Record. Price \$4.00 a year.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

New Mileage in the South.

For several years past two journals, credited with being authorities on railroads, have published annually what purported to be the new mileage in the several States. The papers we refer to are the Railroad Gazette and Railway Age. The disparity between these reports has been so noticeable that the question of their accuracy has arisen. In their records for 1895 they are so widely apart in their calculations as to lead the reader to wonder if either is right. For purposes of comparison the Manufacturers' Record publishes the estimates of new mileage in the South as follows:

	Railroad Gazette.	Railway Age.
Alabama	22.5	53.49
Arkansas	58	32
Florida	38.5	71.75
Georgia	67.7	81.75
Kentucky	25
Louisiana	17	50.83
Maryland	2	2.70
Mississippi	10	13
North Carolina	44.3	39.30
South Carolina	1	6.33
Texas	186.5	224.22
Virginia	2.6	43
West Virginia	68.5	85
Total	498.6	728.37

Here is a difference in the total reported by these journals of about 230 miles, or nearly 50 per cent. of the mileage estimated by the Railroad Gazette. In glancing over the States we find that this journal and the Age are twenty-five miles apart in the returns from Kentucky, thirty miles apart as to Alabama, thirty-three miles as to Florida and Louisiana, over forty as to Virginia, and nearly forty as to Texas.

Such radical differences prove that one or both journals have made grave errors in calculating new mileage in the South. They are more serious from the fact that the summaries have been given out to the daily press, and have been too generally accepted as reliable.

Some time ago the Manufacturers' Record was led to question the accuracy of these compilations, and began publishing summaries from reports secured from the chief engineers of Southern lines and other authorities. Last year one of these railroad publications saw fit to criticize the Manufacturers' Record's figures, but the criticism was shown to be baseless.

Under the circumstances we think it would be very advisable for the "calculation" editors of these journals to "get together" and rectify the errors that one or both have evidently made, or to use the figures compiled by the Manufacturers' Record, which were published two weeks before their estimates appeared.

Western Maryland Report.

The annual report of the Western Maryland Company, recently made public, is very encouraging to the stockholders of the road. This document shows gross earnings from all sources of \$1,277,862.56, an increase of \$74,688.22. The total operating expenses were \$820,150.32, an increase of \$35,365.36, and the net earnings were \$457,712.24, an increase of \$39,322.86. Out of the net profits the following expenditures were made: Construction, \$33,889.97; equipment, \$54,335.54; betterments, \$14,195.01—total, \$102,420.52. While the net earnings of the main line decreased \$10,984.65, those of the leased lines increased \$50,307.51. The floating debt has also been reduced \$108,703.72. The company has made a number of important improvements during the year, among them the construction of a new passenger

station in Baltimore. A handsome terminal station is to be erected in York, Pa., as well.

Opposing the Combination.

In connection with recent railroad acquisitions by the Southern system, a movement in opposition to its policy has been developed in both North and South Carolina. A dispatch from Raleigh states that the attorney-general has decided to begin an action with a view of making the present lease of the North Carolina Railroad by the Southern void on statutory grounds, and it is stated that papers are now being prepared. A few weeks ago the Port Royal & Western Carolina was sold at Greenwood, S. C., to parties representing the Southern system. A dispatch from Columbia states that a number of people living along the line of this road have combined to oppose the sale, and have secured attorneys to take the matter into court. Governor Evans, it is also stated, is much interested in it. In an interview he is quoted as saying that the State will use every means in its power to prevent the Southern from operating the Port Royal & Western Carolina. According to the new constitution of this State, the consolidation of parallel or competing railroads is absolutely prohibited. It is understood that the action against the Southern will be taken on the basis of this section of the constitution. The same ground will be taken in the suit of the attorney-general of North Carolina as well.

New Line to Spartanburg.

The plan to give the city of Spartanburg, S. C., and the territory adjacent to it a connection with the Seaboard Air Line has reached a point where construction work may begin early in January. A correspondent of the Manufacturers' Record at Spartanburg writes as follows:

"The Spartanburg & Rutherford Railway Co. is now organized, and an engineering corps is now in the field making a survey of the route. As soon as the engineer makes his report the work of grading will begin. It is the purpose of this company to have the road in operation by November 1, 1896. The officers are: Arch B. Calvert, president; D. R. Duncan, vice-president; S. J. Simpson, secretary and treasurer; R. K. Carson, general counsel. These gentlemen, with Jos. Walker, J. B. Cleveland and G. W. Nicholls, are directors.

"The length of line will be eighteen miles in Spartanburg county and six miles in North Carolina, connecting with a branch of the Carolina Central division of the Seaboard Air Line system at Henrietta. The road will run through a productive section of country, and will give Spartanburg the benefit and advantages of two competing systems, the Southern and the Seaboard Air Line. There is manifested much interest and enthusiasm in the building of this road, and you can state positively that the road will be built.

"The directors are men of influence and wealth. Mr. Calvert is mayor of this city; Messrs. Duncan, Carson and Simpson are leading attorneys, who have had railroad experience; Mr. Nicholls is attorney also, and quite wealthy; Jos. Walker is president of Merchants and Farmers' Bank; Mr. Cleveland is receiver of the Port Royal & Western Carolina road, and a man of wealth."

Columbia & Maryland Line.

At the annual meeting of the Baltimore & Catonsville Construction Co., the old board of directors was elected, as follows: David Newbold, John Hubner, T. Edward Hambleton, Henry T. Douglas,

R. S. Carswell, George Yakell, S. F. Tyler, of Philadelphia, and John Ridout, of Washington. The officers elected are H. T. Douglas, president; John Hubner, vice-president, and R. Stanley Carswell, secretary and treasurer. This company is constructing the Columbia & Maryland Electric Railway.

Shipping Grain from Southern Ports

The Central of Georgia Railway Co. has taken up the matter of grain shipments through Savannah, and intends securing some of this Western business, which hitherto has gone to North Atlantic seaports. Mr. H. M. Comer, the head of the system, is quoted as saying that his company has been in conference in regard to such shipments with its Western connections, and has received sufficient encouragement to make preparations for the receipt of grain at Savannah. The grain elevator which the company owns at this point is now being placed in readiness for handling the business.

Thirty Tons of Cotton.

The value of the improved system of compressing cotton has already been shown by the increased cargoes and carloads obtained over the old system. The Union Compress Co., of Little Rock, Ark., recently loaded a car with 115 bales of cotton, weighing in the aggregate 60,904 pounds, averaging nearly 530 pounds to the bale. The dimensions of the car were thirty-four feet long, six feet three inches wide and seven feet five inches high. The cotton was compressed by one of the Bierce latest improved hydraulic presses, and some of the bales had a density of forty-two pounds to the cubic foot, the average being over thirty-five pounds.

To Complete the Road.

A dispatch from Kansas City states that the Kansas City, Pittsburg & Gulf Co. has decided to increase its stock from \$10,000,000 to \$20,000,000, to complete the system from Kansas City to the Gulf of Mexico. Work on this road has been in progress for several years, and, according to a report made by Chief Engineer Gillham to the Manufacturers' Record a few weeks ago, 383 miles have been completed. The total length is to be 770 miles, and contracts have been let for a portion of the road to be built. Holland capitalists are extensively interested in the enterprise.

It is understood that the Kansas City, Pittsburg & Gulf Co. has also decided to enter Galveston and Texas City soon after the completion of its line to Sabine Pass. It is reported that arrangements will be made with the Houston, East & West Texas and the Galveston, La Porte & Houston roads for the use of the track of these lines. With terminals at Sabine Pass, Galveston and Kansas City, the Kansas City, Pittsburg & Gulf Company will reach some of the best harbors on the Gulf of Mexico.

Railroad Notes.

Mr. John Glynn, Jr., has resigned his position as treasurer of the Queen & Crescent system.

The Southern Railway Co. has sent several new locomotives to Greensboro, N. C., for use in the service between that point and Norfolk.

Mr. Don Alexander, assistant general freight agent of the Queen & Crescent system, has offered his resignation, to take effect January 15.

Mr. Willard Thomson will be the general freight and passenger agent of the Baltimore, Chesapeake & Atlantic road, as well as the general manager.

Mr. C. H. Sanders has been appointed

general agent of the Louisville & Nashville, at Nashville, Tenn., an office created for him. The appointment went into effect January 1.

Archer Harmon, president of the Jacksonville (Fla.) Ferry Co., will establish a line of steamers between Key West, Fla., and Miami, on the Florida East Coast line, to make daily trips between those points.

A new freight engine has been ordered by the Chattanooga Southern Railway Co. to meet the demands of the increasing traffic on that road, and a number of freight cars are now being made for the same purpose.

The East Louisiana Railway Co. has purchased the steamer Cape Charles for its service on Lake Pontchartrain. The Cape Charles has been running on Hampton Roads in the service of the New York, Philadelphia & Norfolk Company. She is 250 feet long.

Mr. T. B. Lynch, assistant general passenger agent of the Chesapeake, Ohio & Southwestern, has resigned that position to accept a similar one with the Missouri, Kansas & Texas, with headquarters at St. Louis. He will be succeeded by Mr. S. G. Hatch, division passenger agent of the Chesapeake, Ohio & Southwestern at Memphis.

The Macon & Birmingham road has been sold at Macon, Ga., to Messrs. Edwards and Parsons, of Boston. It is reported that these gentlemen represent the Southern Railway Co. The road is 105 miles long, extending from Macon to La Grange, Ga. It has been operated in connection with the Georgia Southern & Florida line.

The statement of earnings of the Georgia & Alabama Railway for the first three months of operation by the new company was as follows: Gross earnings—September, \$46,657; October, \$57,329; November, \$47,609; total, \$151,595. Operating expenses, including taxes, for the three months were \$97,767. Net earnings, \$53,828.

Mr. B. W. Wrenn, general traffic manager of the Plant system, has acquired an enviable reputation as far north as Nova Scotia for his ability as a railroad man. Last season he visited Canada several times in the interest of the Plant system, and the Canadian papers have complimented him highly on the work he has done.

A dispatch from Atlanta announces that the depot to be erected by the Seaboard Air Line in that city will probably be commenced early in 1896. This structure, which has already been described in the Manufacturers' Record, will be one of the finest in the South and will greatly improve the terminals of the Seaboard Air Line and its associate roads in that city.

A Big Combination.

The Manufacturers' Record has been informed that the Bessonet Cotton Compress Co., the Ginners' Compress Co., and the Standard Circular Cotton Co., the three companies owning the cylindrical baling systems which have recently been before the public, have pooled their interests, but on what basis we have not yet been able to learn. Such a combination as this, representing as much capital and as strong railroad influences as are united in these three organizations, ought to have a very powerful effect in developing the cylindrical cotton-baling system.

In addition to the battleship contracts, the Newport News Shipbuilding & Dry-Dock Co. has secured the contract to build a \$50,000 steam pilot boat for Pensacola, Fla.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Is the South Interested in Building More Oil Mills?

Editor Manufacturers' Record:

It is reported that the citizens of Heidelberg, Miss., are taking subscriptions to build a cotton-oil mill at that place.

The building of new oil mills is a matter of so much consequence, not only to those who put capital in them, but also to the cotton planters and the Southern public generally, that I trust the readers of the *Manufacturers' Record*, particularly the editors of Southern newspapers who exert a wide influence in molding Southern opinion, will find it worth while to give to this article more than the casual attention which articles about cotton oil generally receive.

Cotton Oil and the Southern Press.

Perhaps it may not seem at first glance how the matter of building more oil mills is of any special interest or consequence to the general public. The public has never given the cotton-oil industry the attention which it deserves. They regard it as a sort of side-show to the cultivation of cotton, and while any writer upon cotton culture, acreage, condition and size of the crop, and, indeed, upon any subject directly concerning cotton, finds the columns of the Southern papers always open to him, it is with great difficulty that any writer upon the cotton-oil industry can get a hearing in those papers. The trade papers, the *Manufacturers' Record* in particular, have always shown a deep interest in and appreciation of this industry, which is particularly gratifying to lovers of cotton oil.

Why Cotton Oil Deserves a Hearing.

It is hard to see why so little attention is given by the public to this subject, when one reflects that there are two pounds of cottonseed raised and ginned to every pound of cotton, twice as much freight to handle, twice as much raw product to manufacture, and twice as much finished product to dispose of (if the industry were fully developed), as there is in the case of cotton.

Furthermore, the quantity of cotton manufactured at the South is as nothing compared with that manufactured in New England and abroad, while in the case of cottonseed almost every pound of it that is manufactured at all is manufactured in Southern factories, with Southern labor and chiefly by Southern capital. The cotton-oil industry is as distinctly, peculiarly and exclusively a Southern industry as cotton is a Southern agricultural product, and there is no reason why it should not challenge a portion of that Southern feeling and sentiment which has almost from the beginning been thrown around the culture of cotton.

Uses of Cotton and Cottonseed Products Compared.

As far as a comparison of the uses of cotton and of cottonseed products go, the latter are far more worthy the attention of the public (perhaps I should say the male portion of it).

Cotton contributes nothing to the fertility of our soil, nothing to the food of man or beast. The best that can be said of it is that we make clothing out of it. Of cotton oil, on the other hand, more than one-half the entire production, which has now reached 1,000,000 barrels per annum, is sold for human food in compound lard and lard substitutes, in butterine, salad oil, etc. The rest is used for soap-making, illuminating and dozens

of other uses all closely related to human needs. Cottonseed meal and hulls feed and fatten our cattle, and in the condensed form of dressed beef, in refrigerator cars go all over the Union and across the water.

New England's barren soil blossoms as the rose under the benign influence of cottonseed meal, and no hayseed legislator has yet devised a law to prohibit the enriching of butter with cotton oil when fed in cottonseed meal through the cow.

Columns upon columns of instructive and entertaining matter might be written upon the subjects relating to cottonseed, its manufacture, uses and its economic bearing upon the enrichment and development of the South.

Now, as to the subject in hand—the building of more oil mills—the argument is very simple.

Why So Few Cottonseed Are Crushed

Not one-third of the cottonseed ginned are crushed, i. e., manufactured into oil, meal and hulls. The chief reason why the other two-thirds are not crushed is because about that quantity is ginned so far from the oil mills in operation that the prevailing price of cottonseed does not justify the expense of hauling them out and freighting them to the mills.

It is eminently desirable that at the earliest possible date all the cottonseed ginned and not needed for planting shall be crushed, so as to be available for food for man and beast, and for the fertilizing of our lands. There are two ways to bring this about—first, either small mills must be located near the seed that is hard to get out to market, or second, the price of cottonseed must be raised so that it will pay to haul them out and freight them to the mills already established.

The good people of Heidelberg are no doubt acting upon the first idea. At first blush this strikes one as a perfectly natural, proper and commendable proceeding. But let us look at this critically.

The Market for Cotton Goods and Outlook for Cotton.

While cotton goods have had over 100 years to find and make their market, cottonseed products have had little more than twenty-five years. The result is, that while the value of cottonseed products is not generally known, and certainly not half appreciated, cotton goods are everywhere known and liked, and no prejudice anywhere exists against them except by these untutored natives of torrid climates who are prejudiced against wearing any clothes at all—people whom I fear during our dog days we are more inclined to envy than to pity.

In spite of the great development of the market for cotton goods and the favor in which they are held, the best authorities inform us that the outlook for cotton goods is still growing, both by the increase in population in civilized countries and by commerce and the missionaries bringing new peoples under the influence of civilization and convincing them that up-to-date etiquette requires the wearing of more clothes and changing them oftener than their fathers did.

One may confidently predict, then, that in the future a 15,000,000-bale crop of cotton may be grown in the Southern States and sell at as high a price per pound as an 8,000,000-bale crop now does.

But that time has not yet come, and the practically unanimous advice to the cotton planters of all the thinking men who have the interests of the South at heart, is not to raise over an 8,000,000-bale crop at present, and to let increase in production follow the gradually growing demand for cotton goods. This is plain common sense.

Common Sense Applied to Cottonseed.

Now, why should not the application

of such plain common-sense principles be made to the production of cotton oil as well as to the production of cotton. Last year we had (following the analogy of cotton) a 1,000,000-barrel crop of cotton oil. It was too much. Although thousands of barrels of cotton oil were carried over to this season, the price of oil declined to eighteen cents per gallon, and of seed to \$8 per ton. The short cotton crop of this year, and the proportionately less quantity of cottonseed available for making oil, is probably all that prevented cotton oil from declining to ten or twelve cents per gallon and seed to \$5 per ton this season. A cotton-oil crop of 750,000 barrels will bring more money to the oil mills, more money to the planters and more money to the South than a 1,000,000-barrel crop of cotton oil. I hold, therefore, if my argument be sound, as I believe it to be, that it is folly at the present time to build any new cotton-oil mills, folly to open up any new seed territory, folly to increase the present crush of cottonseed.

The Future of the Cotton-Oil Industry.

I say distinctly at the present time, for I believe that the cotton-oil industry has a future before it little dreamed of, even by those engaged in it. Such intrinsic merit, such value have the products of cottonseed, and such their direct bearing upon the well-being of the Southern States, that I believe if cottonseed were rightly cared for, rightly manufactured and the products rightly used by the people of the South that they would make the South rich beyond the wildest dream the desert-worn Hebrew ever had of Palestine.

Cotton oil is nowhere near as good in the general average as it can and ought to be made. The market and the outlet for cottonseed products are nowhere near as fully developed as the outlet for cotton goods. A violent and unreasonable prejudice has existed from the first against the use of cotton oil for food, which is its highest, best and most profitable use. Increase of population in civilized countries will cause increased consumption of cottonseed products. What a field there will be for cotton oil in soap alone as civilization of the natives of the world increases!

While our missionaries' wives are persuading the female converts to civilization to use cotton goods, and, at least, wear sunbonnets and "Mother-Hubbards," will they not also teach them that "cleanliness is next unto godliness."

Remove the prejudice that exists against cotton oil by time, by education and by better oil, and the day will come when all the seed from a 15,000,000-bale cotton crop, except those needed for planting, may and will be crushed, and the cottonseed products sell better than today, and cottonseed bring a greater price per ton. Then the number of mills may be indefinitely increased, and every town, however small, where there are enterprising citizens, may have its own oil mill.

That time has not yet come, and planters will do well to be satisfied for the present with the number of mills already in existence; do well to be content to see a portion of their cottonseed go to waste, or better compost it and use it as fertilizer rather than try to increase the present production of cotton oil.

My advice to the good citizens of Heidelberg, who certainly, judging from the classic name of their town, ought to be open to argument, is the same as my advice to every community now contemplating the erection of a cotton-oil mill, viz: "Don't! Wait for the good time that is coming to build your oil mill, and for the present examine into the causes

why cottonseed are too low for you to ship to the nearest mill."

The reasons why cottonseed are low are—but that, to use Kipling's put-ent expression, is another story—and if I have not exhausted the patience of the editor of the *Manufacturers' Record* and its readers, I may give my ideas upon that subject in another article.

EDWIN LEHMAN JOHNSON,
Memphis, Tenn., December 19.

The Market for Cottonseed Products.

New York, December 31.

With the dullness which prevailed in the cotton-oil market recently, an improvement is not expected until the holidays shall have passed. Values are not well maintained in the local market, although reports from the South indicate firmness. The position of lard in its bearing on cotton-oil values is unchanged, the consensus of opinion being that no material betterment in oil values will develop until the initial movement is taken up by lard. At this especial time it is well for the holder of cotton oil, whose action with regard to the immediate future has not been predetermined, to carefully consider the significant fact that packers in the main are holding their products for higher prices, while concerted action in the procurement of supplies on the current weak and unstable range of prices would still further emphasize their views on prospective trading. The interpretation of these happenings points to improved compound-lard transactions, with a similar development at more remunerative prices of those of cotton oil concurrently. Lard is now quoted at 5.50 cents, and Chicago quotes May lard 5.50 cents. Prime summer yellow has been disposed of on a 28-cent basis, but offers at this figure are comparatively scarce. Crude in barrels is quoted at 24½ cents, light stocks, while prices for crude in bulk in the South are easier. Unquestionably the low prices quoted by English producers very materially affects the American export trade. London-made crude oil is quoted at 14s. 6d. per hundredweight (112 pounds), and 17s. to 17s. 6d. for refined, while American refined is nominally quoted on same market at 18s. Thus the export demand, which heretofore absorbed the greater portion of American off-grade yellow productions, has been diverted to English refined, while the home trade must perforce depend upon the season's profits, chiefly from the sale of prime oil grades and the feeding materials, cake and meal. Sales reported for the week aggregate 1200 barrels, of which a large proportion was butter oil, while 2000 barrels were exported, in part the consummation of transactions previously made. The foregoing number includes 185 barrels of off-grade summer yellow, sold at 27 cents, and a small lot of off crude at 23 cents. Current prices are as follows: Prime crude in barrels, 24 to 24½ cents; off crude, 22 to 23 cents; prime crude loose at the mills, 20 to 22 cents; prime summer yellow, 28 to 28½ cents; butter oil, 29 to 30 cents; off summer yellow, 26½ to 27 cents; prime white summer, 31 to 32 cents; yellow winter, 35 to 38 cents; white winter, 36 to 39 cents, and soap stock, ¾c. per pound.

Cake and Meal.—Private advices just received from England indicate a good enquiry for American cake at recent rates. Stocks are light, owing to the improved home consumption. Increasing stocks of cottonseed in Alexandria and quiet market for oil and undecorticated cake have weakened prices of the latter. This is probably the first time in the history of the business that the volume of cake and meal consumed for domestic uses has materially diminished that of the exported proportion, while there are un-

doubted indications of further developments on the same lines. A parcel of 615 bags of delinted seed (American) was sold from the Liverpool quay at £4 10s. per ton, which is on a par with the Egyptian variety with regard to price. New Orleans quotes \$19 for cake, and Memphis \$16.50. Exports are light, while receipts at this market are 4000 bags meal and 1100 bags meal at Boston. Meal is quoted here at \$20.50 to \$21 per ton.

Cottonseed-Oil Notes.

Among the enterprises contemplated at Fort Worth, Texas, is the erection of a cottonseed-oil plant in the near future. It is reported that a correspondence is now going on between a gentleman of that city and a very wealthy oil-mill firm, and the capital, it is said, will come largely from other points. It is proposed to build a mill of 100 tons capacity a day, and a refinery for the products will be included in the plant.

During the past week there have been very few changes in the market at Houston, Texas, for cottonseed products. There is a limited demand, while prices continue firm. The offerings to purchase from foreign buyers have recently been very light, due, it is said, to the general demoralization in consequence of the Venezuelan dispute. The following quotations were posted on the 27th ult. by the cottonseed-product department of the Houston Cotton Exchange and Board of Trade: Choice crude oil for butter oil and strictly prime crude oil, 20½ cents; prime crude, 20 cents; prime butter oil in barrels, 28 to 29 cents; prime summer yellow oil, 22½ to 23 cents; prime cottonseed cake and meal, \$12.50 to \$14 f. o. b. mill interior points; cottonseed hulls, \$4 to \$4.50; linters—A, Houston delivery and classification, 4 cents per pound.

The market for cottonseed products at New Orleans on the 27th ult. was quiet and unchanged. Crude in bulk in open market, 20½ cents; yellow, 24½ to 25½ cents in barrels; meal, \$18 to \$18.25; cake, \$18 to \$18.25 per long ton for immediate delivery. Receivers' prices for cottonseed products were quoted as follows: Cottonseed, \$10 per ton (2000 pounds) delivered net to the mills; cottonseed meal jobbing at depot, \$17.50 to \$18 per short ton, \$19 to \$19.50 per long ton for export f. o. b.; cottonseed oil, 23½ to 24 cents per gallon for strictly prime crude, in bulk 21 to 21½ cents, and 26 to 26½ cents for refined oil at wholesale or for shipment; oilcake, \$19 to \$19.50 per long ton f. o. b.; foots, 1 to 1½ cents; linters, 4¼ to 4½ cents, according to style and staple; hulls delivered at 20 to 25 cents per 100 pounds, according to location of mills. Freight is firm and unchanged at \$1 per barrel for oil to New York, \$1.50 to Boston, \$1.40 to Philadelphia and \$1.55 to Baltimore, Fall River and Providence via New York; oil to Liverpool 15s., and to London, Havre, Antwerp, Rotterdam and Hamburg 20s.

The Union Compress Co., of Little Rock, Ark., recently loaded a car with 115 bales of cotton, weighing in the aggregate 60,904 pounds, averaging nearly 530 pounds to the bale. The cotton was compressed by one of the Bierce latest improved hydraulic presses, and some of the bales had a density of forty-two pounds to the cubic foot, the average being over thirty-five pounds.

It is reported that the American Cotton Picker Co., of Pittsburg, of which Mr. Thomas J. Keenan, Jr., of that city, is said to be vice-president, contemplates the establishment of a factory in the South for the manufacture of cotton-picking machines.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

South Carolina Cotton Mills.

The Manufacturers' Record has had so much to say about the increase of cotton-mill building in South Carolina that the views along the same line of the Industrial Record, of Boston, may be of interest. In an editorial letter upon this subject in its last issue it is said:

"The report of the secretary of state for the year ending October 31, 1895, shows that charters were issued to twenty companies, with an aggregate capital stock of \$2,775,000, for the building of cotton mills, and that commissions were issued to sixteen more companies, with a capital stock of \$1,470,000, for the same purpose. All of these mills will not be built, but the year 1895 has been a most remarkable one for cotton-mill building in South Carolina. The people of the State can be said almost to have gone wild on the subject, and the intention seems to be for each hamlet that can raise \$100,000 by monthly instalments or otherwise to build a cotton mill. Savings that formerly went into building loan associations or such institutions are now put into cotton factories. And the report of the secretary of state does not by any means show all that has been done. No account is given of the old mills that have added to their plants.

"A brief survey of the State will give some idea what has been done. To the 10,000-spindle mill at Gaffney, which has been running night and day for about two years, an addition of 40,000 spindles is about completed. The bricks are being made for Spartan Mill No. 2, at Spartanburg; No. 1 mill has 32,000 spindles. Clifton No. 3 mill, a few miles away, with 20,000 spindles, is nearly finished; Nos. 1 and 2 have 50,800 spindles. Tucuman, twenty miles from Spartanburg, with 15,000 spindles, and the only mill in the State equipped with Draper looms, commenced running a few months ago; and the contract for making brick for an addition to the Whitney Mill has been let. At Union, the 12,000-spindle mill, after running one year, is having an addition of 50,000 spindles built. This mill then will probably have more spindles under one roof than any other mill in the State.

"The Norris Mill, \$100,000 capital stock, is being built at Central. At Abbeville a \$65,000 mill is building; at Camden a \$100,000 mill; at Rock Hill two \$200,000 mills are building; at Laurens a \$250,000; at Edgefield a \$100,000; at Greenville one of \$250,000 and another of \$150,000; at Lexington, \$50,000; at Bamberg, \$40,000; at Greers, \$50,000. At Newberry 10,000 spindles have been added to the old mill and set to work this year; Pelzer No. 4, with 55,000 spindles, to be run by electricity, is almost ready to begin work. Paeolet No. 4, with about 20,000 spindles, has been completed and set to work during the year, and the same can be said of Piedmont No. 4. At Batesburg a \$50,000 mill has commenced work within the year. At Columbia the Richland, for which ground was broken in February, has now at work 10,000 spindles and 10,000 more are to be put under the same roof; here, too, is the Granby, which will hold 40,000 spindles, and which will be finished by spring. At Lockhart Shoals, Union county, 25,000 spindles are in position ready to begin work, and will begin to hum soon after New Year's.

"Nor are these all, for the exact status of several other mills in the State is not known to the writer, and the score or more of companies in various stages of

organization, many of which will build mills, are not taken into consideration.

"A thorough investigation would show that not much less than 200,000 more spindles are at work in South Carolina at the close of 1895 than were at work when the year began, and that 150,000 is a conservative estimate of the additional number to be placed in mills now building in the State. So that it can be said that 350,000 spindles will have been added to South Carolina's quota as a result of work done in 1895. With the impetus the movement has gained in the last year, and the profits the cotton mills are making, it is safe to say that 1896 will mark developments in the State not dreamed of a year ago.

"There is a decided change, too, in the class of goods that the new mills are to make as compared with the class made by the older mills in the State. Very much finer goods than formerly is the order of the day, and it has been clearly demonstrated within the last twelve months that the finer the goods made the greater the profit. This accounts for the increase of the number of spindles at Gaffney from 10,000 to 50,000, and at Union from 12,000 to 62,000. Both of these mills have been built within the last two years, and their success has been phenomenal, as is made evident by the facility with which their capital stocks have been increased. The tendency, too, is towards diversification, and one or two small knitting mills that have been built recently have been such decided successes that a number of such mills are to be built in the State. The Cheraw Knitting Mill is a noteworthy example. This mill was chartered on March 27 last, with a capital stock of \$10,000, and it was not long thereafter before it was at work. It met with such success that its capital stock has been doubled, and an addition duplicating the original mill is now building.

"As is indicated, the people of the State are doing a great deal in the line of building cotton factories, but the only reason they do not do more is the lack of capital."

A 10,000-Spindle Mill.

The directors of the Whitney Manufacturing Co., of Whitney, S. C., which lately decided on enlarging, have formulated their plans for same. It is decided that a new power-house will be built, equipped with a 600 horse-power compound engine and five new tubular boilers seventy-two inches by sixteen feet, making 875 horse-power in all controlled by the mill. The present mill building will be extended, and an equipment of 10,000 spindles and necessary complement of machinery will be installed, making 20,000 spindles in all.

A Big Mill Completed.

The Dwight Manufacturing Co., of Chicopee, Mass., has entirely completed its big mill at Alabama City, near Gadsden, Ala., and active manufacturing of three-yard sheetings for shipment to Corea, China, Turkey and the north of Africa will be commenced in a few weeks. This plant is equipped with 30,000 spindles and 800 looms, a 1500 horse-power condensing engine, rope transmission of power and all the latest and most improved appliances used in the manufacture of cotton goods. Hon. Thos. Jefferson Coolidge, president of the company, and his associates have been engaged in cotton manufacturing for many years, and in the event of the present mill's success, which is not to be doubted, will double the plant. The operatives will number about 800, and the company has erected for their use a number of cottages with all modern conveniences. Mr. H.

Gardner Nichols is the manager of the company's affairs at the new mill.

Textile Notes.

The Victor Cotton Mill, of Charlotte, N. C., has declared a dividend of 4 per cent.

Mr. S. B. Wilkens is trying to organize a company at Cowpens, S. C., to build a \$150,000 cotton mill.

Messrs. J. P. Carlisle and B. A. Morgan have incorporated the Carolina Knitting Co., of Greenville, S. C.

Messrs. W. O. Ware & Son, of King's Mountain, N. C., contemplate putting in looms for cloth manufacturing.

Mr. B. A. Puckett, of Opelika, Ala., contemplates establishing a knitting mill, and is now investigating machinery.

Mr. Chas. W. Davis, of Aiken Junction, near Aiken, S. C., is trying to organize a company to build a 20,000-spindle cotton mill.

Mr. L. P. Walker, of Spartanburg, S. C., is continuing his efforts to organize a cotton mill company. He contemplates a plant of 10,000 spindles, with the necessary complement of looms.

Mr. Jno. L. Harper, of Americus, Ga., is contemplating the establishment of a cotton mill, but as yet is undecided whether to manufacture yarn or cloth. He is now investigating and obtaining estimates on machinery.

The directors of the Co-operative Cotton Mills, of Meridian, Miss., have contracted with the Providence (R. I.) Knitting Machine Co. for fifty Victor automatic knitting machines. The knitting company is about to select a site for its building, and work on same will be pushed rapidly. The machinery will be installed immediately on completion of the building, and 400 dozen pairs of hose will be made daily. Mr. C. F. Woods is secretary of the mill.

The annual meetings of the Lanett Cotton Mills and the West Point Manufacturing Co., at West Point, Ga., were held on December 16 and the old board of directors was elected. Mr. L. Lanier was elected president of both companies; Mr. F. B. Sears, treasurer of the Lanett Mills, and Mr. H. S. Sears, treasurer of the West Point Mills. The usual semi-annual dividend of 4 per cent. for the Lanett Company and 5 per cent. for the West Point Company were declared.

The Union Cotton Mills' new mill now building at Union, S. C., will be a structure 450 feet long and 127 feet wide, and therein, when completed, will be placed sixty Pottet cards, 40,000 Draper spindles and 1000 Stafford looms. An engine of 1500 horse-power will furnish the power. Upon the looms fine sheetings will be woven sixty-eight and seventy-two, four and three-quarters to pound. The company expects to start up the mill on or about July, 1896. Mr. T. C. Duncan is president.

A. A. Beard, of Guntersville, Ala., has secured a patent on an electric motor which is now on exhibition at Atlanta. The inventor claims that it is entirely different from the motors now in use. The motor is to be used in operating engines, and can be applied, according to the inventor's statement, to buggies, street cars and marine work and bicycles.

A dispatch from Brunswick, Ga., states that a syndicate which includes Senator Taylor, of Kansas, will purchase 2500 acres of Ossabau Island, off the Georgia coast, and make of it a pleasure resort. Charles M. Harper, of Rome, Ga., is the owner.

MECHANICAL.

New Hub and Cone Machine.

We present herewith an illustration of a new hub and cone machine made by the Lodge & Davis Machine Tool Co., of Cincinnati, Ohio. While it has all the essential features of a special machine, yet it is not special, and can be changed from a hub machine into a regular standard screw machine in less than ten minutes. It is adapted to the forming and drilling of hubs, the making of cones, cups, axles, etc.

The head-stock is friction back geared, and has a two-step cone for a five-inch belt. The friction is positive in action, and quick and easy in operation. The spindle is made of crucible steel, ground to an accurate diameter and journaled in bronze boxes, with provisions for taking up the wear. It is furnished with the Parkhurst automatic chuck and feeding attachment, which enables the operator to feed, grip and release the bar without stopping the machine. This is a valuable device on a hub machine, commending itself to operators.

The hub rest is a massive affair, taking a long bearing directly on the bed, preventing chatter and insuring a smooth finish to the hubs. It is provided with two heavy uprights, having dovetailed grooves supporting the front and rear tools. The rear tool does the roughing, and is serrated to break the chips. It is started in ahead of the front tool, but by reason of the feed-screw being of a coarser pitch at the front end, the finishing tool gradually feeds in ahead of the roughing tool, giving the hub a smooth finish.

The steady rest, or guide for the bar, is placed between the hub rest and the cut-off rest. It is operated by a right and left hand screw, and will grip stock from one-half to two and one-eighth inches diameter.

Each machine is furnished with set of tools for forming rear hub, cut-off rest and collet to suit size of stock for rear hub.

The double-friction countershaft has 14-inch pulleys for four-inch belt, and should run 160 revolutions per minute.

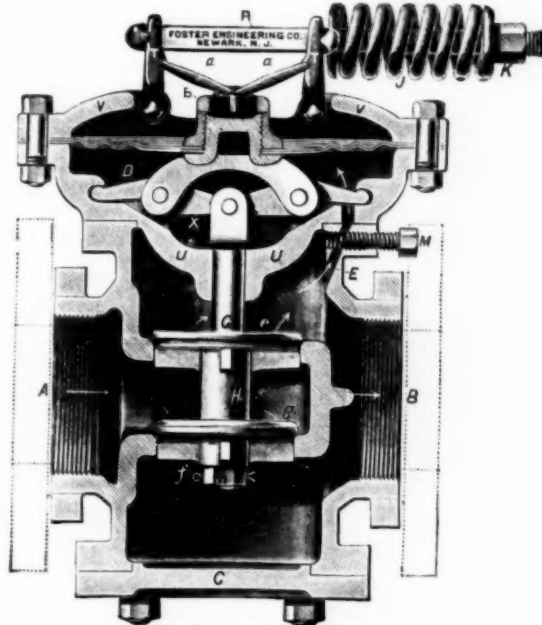
A New Automatic Safety Stop Valve.

A new automatic safety stop valve has been designed in response to a demand

charge pipe, which, acting on the diaphragm, tends to open the valve.

The spring is so adjusted as to allow the valve to open wide enough to supply the maximum volume and pressure desired.

It will thus be seen that in the event of the pipe or fittings breaking, allowing a large volume of steam or water to escape, the pressure on the delivery side of the valve would instantly fall, relieving the pressure on the diaphragm and allowing



NEW AUTOMATIC SAFETY STOP VALVE.

from the Pennsylvania Railroad Co.'s coal mines, where large steam mains—many hundreds of feet in length—are carried through tunnels into the mines. These pipes are liable to injury, in which case the steam from the boilers is apt to escape and do great damage before notice could be sent to close off the stop valve at the boilers.

The same contingency is liable to occur

the spring to close the valve.

When used on steam, the valve should be placed near the boiler.

Prices on application to the manufacturers, the Foster Engineering Co., of Newark, N. J.

An Extensive Deal.

Mr. Chas. Davis, president of the Lodge & Davis Machine Tool Co.; Mr. Thos.

one of the strongest manufacturing industries in the country.

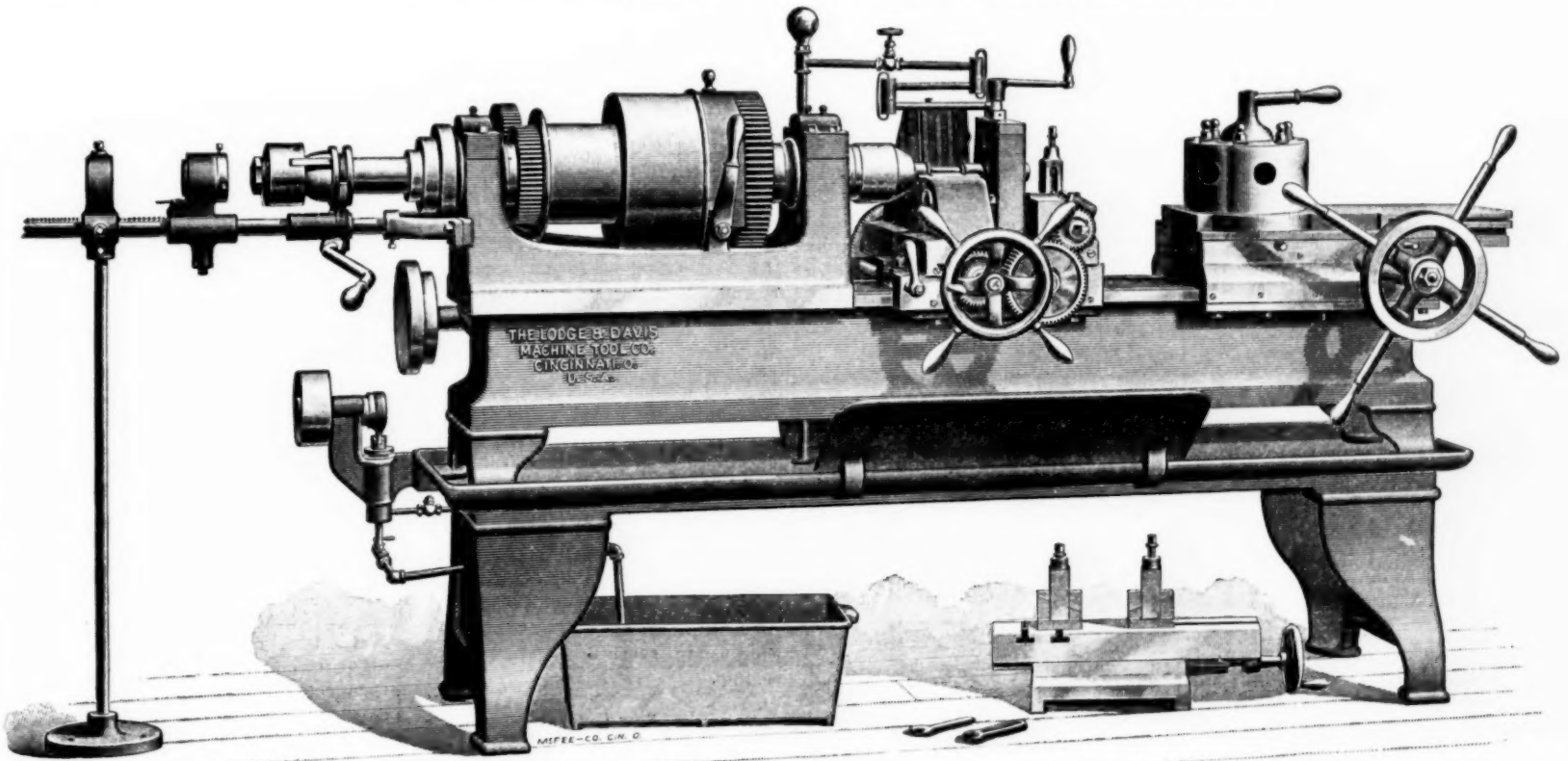
Few concerns have come into prominence more rapidly than the Lodge & Davis Machine Tool Co. The company was incorporated in 1886 with Mr. Chas. Davis as president, and under his well-defined and aggressive management the business rapidly grew. New buildings were added from time to time to handle the increasing trade, and today a floor space of over 60,000 square feet is occupied, furnishing employment to nearly 600 men.

The machines produced in this plant are used in the manufacture of locomotives, stationary engines, steam pumps, electric dynamos and motors, agricultural implements, sewing machines, bicycles, woodworking machines, mining machinery, etc. From these works have been furnished large quantities of tools for the manufacture of cannon and other ordnance to the United States government, its product being well represented in the navy-yards at Washington, Norfolk, Watervliet, Brooklyn and Mare Island.

Cultivating the export trade largely, the company has made shipments to nearly every civilized country. It now has in process of construction three carloads of machinery for an extensive mining company in Mexico; also several machines for Russia and South America. Machines for Africa to be used in repairing sugar and mining machinery are also being built. Regular authorized agents of the company travel in Mexico, South America, Russia, France and Germany.

This concern lately entered largely into the manufacture of special bicycle machinery, and as a result of its efforts in this direction the works are operated night and day to full capacity.

It is known as a very prosperous enterprise, and has no preferred stock or indebtedness, and January 1 declared a dividend of 6 per cent. for the last six months.



NEW HUB AND CONE MACHINE.

The cutting tools are made of the best steel the full length of the hub, and are sharpened by grinding straight across the face, without altering their form. They are constantly flushed with oil by a powerful plunger pump, driven by a belt direct from the countershaft.

The power feed to the hub rest and turret is derived from the main spindle by cones, and is disengaged automatically.

in water mains. Break of a fitting, bursting of a pipe, or other accident, would result in more or less serious damage. The Foster valve is intended to guard against such accidents as the above, and its operation is as follows:

It is entirely automatic. Referring to the illustration, the power of the spring J tends to close the balanced valve H against the delivery pressure in the dis-

Egan, president of the J. A. Fay & Egan Co.; Mr. Robert Laidlaw, president of the Laidlaw-Dunn-Gordon Co., and Mr. Thos. McDougall, a well-known Cincinnati attorney, have bought the \$240,000 worth of stock in the Lodge & Davis Machine Tool Co., heretofore held by William Lodge, Samuel Lodge and Mary Lodge. This terminates a long and bitterly contested legal controversy, and formulates

The new officers of the company will be Chas. Davis, president; W. H. Burtner, vice-president; B. B. Quillen, secretary.

The Lodge & Davis Machine Tool Co., the J. A. Fay & Egan Co. and the Laidlaw-Dunn-Gordon Co. operate their own stores in the principal cities of the country, and under the present arrangement it is probable that they will be consolidated to curtail expenses.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Lumber Directory.

Readers of the Manufacturers' Record who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., January 2.

The tone of the local lumber market shows no improvement, and until the business affairs of the old year are arranged and matters closed up, the movement will be light. There is very little buying at present, and no demand of any consequence, either from local or out-of-town buyers. Stocks are generally reduced, and the assortment somewhat broken, but there is still a sufficient supply for the limited demand. In air-dried yellow pine prices are steady, and a few sales reported to box factories and planing mills. Kiln-dried North Carolina yellow pine is in fair request, and some demand from out-of-town buyers. White pine is firm as to price, with a moderate volume of business reported. Cypress is dull and steady. The hardwood market has been quiet, governed by the same conditions as the yellow-pine industry. There has been a fair inquiry from out of town, but the local trade is holding off for the present. In the export trade there is very little doing, the shipments for December having been light. Planing mills and all local woodworking factories report business quiet, on account of the holidays.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE		
5-4x10 No. 2, kiln dried.....	\$16 00@	18 00
5-4x12 No. 2, kiln dried.....	17 50@	18 50
4-4x10 No. 1, kiln dried.....	16 50@	17 50
4-4x12 No. 1, kiln dried.....	17 00@	17 50
4-4 nar. edge, No. 1, kiln dried.....	13 00@	14 00
4-4 wide edge, No. 1, kiln dried.....	18 00@	19 00
6-4x10 & 12, No. 1, kiln dried.....	23 00@	24 00
4-4 No. 1 edge floor, air dried.....	13 50@	14 50
4-4 No. 2 edge floor, air dried.....	10 50@	11 50
4-4 No. 1 12-in. stock, air dried.....	14 50@	15 50
4-4 No. 2 12-in. stock.....	12 00@	13 00
4-4 edge box or rough wide.....	7 50@	8 50
4-4 edge box do. (ord. widths).....	7 00@	8 00
4-4 edge box do. (narrow).....	6 50@	7 50
4-4 12-in. or rough wide.....	9 50@	10 00
3/4 narrow edge.....	6 50@	7 50
3/4 wide.....	7 50@	8 50
3/4x10-inch.....	8 00@	9 00
Small joists, 2 1/2"-12, 14 and 16 long.....	8 50@	9 50
Large joists, 3"-16 long & up.....	9 50@	10 50
Scantling, 2x3"-16 and up.....	8 50@	9 50

WHITE PINE.

1st and 2d clear, 4-4, 5-4, 6-4 & 8-4.....	48 00@	50 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@	44 00
Good edge culls.....	14 00@	15 00
Good stock.....	16 00@	17 00

CYPRESS.

4-4x6, No. 1.....	20 50@	21 50
4-4x6, No. 2.....	14 50@	15 50
4-4x6, 16 feet, fencing.....	12 50@	13 50
4-4x6, rough.....	9 00@	9 50
4-4 rough edge.....	9 00@	9 50
4-4 edge, No. 1.....	18 00@	19 00
4-4 edge, No. 2.....	12 00@	13 00
Gulf, 4-4, Nos. 1 and 2.....	28 50@	30 50
Gulf, 6-4, Nos. 1 and 2.....	31 50@	32 50

HARDWOODS—WALNUT.

5-8, Nos. 1 and 2.....	65 00@	75 00
4-4, Nos. 1 and 2.....	80 00@	90 00
5-4, 6-4 and 8-4.....	85 00@	95 00
Newell stuff, clear of heart.....	85 00@	100 00
Culls.....	20 00@	30 00

OAK.

Cabinet, white and red, Southern, plain-sawn and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	29 00@	33 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@	55 00
Culls.....	10 00@	15 00

POPLAR.

Nos. 1 and 2, 5-8.....	24 50@	25 50
Nos. 1 and 2, 4-4.....	28 00@	30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@	33 50
Culls.....	13 00@	16 00

SHINGLES.

Cypr., No. 1 h'ts, sawed, 6x20.....	7 25@	7 75
No. 1 saps, sawed, 6x20.....	5 50@	6 50
No. 1 hearts, shaved, 6x20.....	6 50@	7 50
No. 1 saps, shaved, 6x20.....	5 25@	5 50

LATHS.

White pine.....	2 70@	2 75
Spruce.....	2 15@	2 25
Cypress.....	2 15@	2 25

Charleston.

[From our own Correspondent.]

Charleston, S. C., December 30.

The year 1895 closes with considerable activity in all departments of the lumber industry at this and adjacent milling points in the State. The demand is of greater volume than was expected sixty days ago, and orders continue to come to hand in unusual numbers. Prices are generally firm for all desirable grades and dimensions of material and the market closes steady, as follows: Merchantable, \$14 to \$16 for city-sawn, \$12 to \$14 for railroad; square and sound, \$9 to \$13 for railroad, \$8 to \$11 for raft; dock timber, \$4.50 to \$6.50; shipping, \$8.50 to \$10.50. There is a fair demand for shingles at \$5 to \$7 per thousand. The mills at Georgetown have more orders than they can handle at present and will push the work for filling contracts with vigor for the next sixty days. The Gardner & Lacy Lumber Co., of Georgetown, has closed down, adding 40 per cent. to its capacity of output, and is building several more dry-kilns to take care of its growing business. The company reports orders coming in freely, and it will be pushed to supply the demand. The McDonough Manufacturing Co., of Eau Claire, Wis., is putting in one of its latest premium band mills, and when all improvements are completed the Gardner & Lacy Company will be fully equipped for business. During the past week the following vessels are reported among the clearances: For New York, schooners Thomas A. Ward, 684,000 feet of lumber; Nancy Smith, 216,190 feet, and Florence Randall, 542,000 feet; steamer Comanche, 43,000 feet, with other cargo. The schooner Julia A. Warr cleared for Fall River with 145,000 feet of lumber, and steamship Iroquois, 130,000 feet, with other cargo. The total shipments of lumber from this port since September 1 amount to 21,919,564 feet to domestic ports and 668,000 feet foreign, making a total of 22,587,564, against 22,587,564 feet for the corresponding period last year. Lumber freights are very steady, with a limited supply of handy-sized tonnage. There are no charters direct reported.

Savannah.

[From our own Correspondent.]

Savannah, Ga., December 30.

All the conditions surrounding the lumber market here are very satisfactory, and the year closes with an encouraging outlook for the opening of 1896. The demand during the past week has been very decided, both for the domestic and foreign trade. At all milling sections of Southern Georgia business is reported quite active and mills have all the orders they can well handle. At Darien, Brunswick, Cordele and other milling sections orders are coming in freely and shipments for the month of December will be of considerable volume. With the promised demand prices are firm and hardening, and for all desirable material outside figures are realized. The market closes with quotations as follows: Ordinary sizes, \$11 to \$12; difficult sizes, \$13 to \$18; flooring boards, \$15 to \$22; shipstuffs, \$16 to \$20, and crossies, \$10. The shipments for the week ending the 28th inst. are as follows: Schooner Edward R. Avery for New York with 425,000 feet of pitch-pine lumber, and by steamer, 330,000 feet; Baltimore steamer cleared with 53,632 feet of lumber, and steamship Gate City for Boston with 36,765 feet. The Portuguese bark Alianca cleared for Oporto with 178,924 feet of pitch-pine lumber. Lumber freights are firm, with no material change in rates. The rates from this and nearby ports in Georgia are quoted at \$4.25 to \$5.50 for a range including Balti-

more and Portland, Maine. Railroad ties, basis 44 feet, 16 cents. Timber rates are 50 cents to \$1 higher than lumber. To the West Indies and Windward rates are nominal; to Rosario, \$12 to \$13; Buenos Ayres and Montevideo, \$10 to \$11; to Rio Janeiro, \$14; to Spanish and Mediterranean ports, \$11.30 to \$11.50; to United Kingdom for orders nominal for lumber at £4 5s. per standard. A charter is reported of a Swedish bark, 721 tons, Liverpool to Jacksonville with salt at 5s., and Darien, Ga., to United Kingdom or Continent with pitch pine at 95s., chartered abroad.

Mobile.

[From our own Correspondent.]

Mobile, Ala., December 30.

A decided increase in the volume of business has characterized the lumber market here during the past week. Several large cargoes have gone out to South American ports during the week, and the demand from these sources shows a decided improvement during the past three months. The year closes with a favorable outlook for a good trade during the first quarter of 1896, and manufacturers and others interested in the industry are in better spirits, while they look for an appreciation in values early in the new year. The timber trade is quiet, with stocks light and shippers cautious in their movements. Advices from European ports are more encouraging, and the market reported a shade firmer. Hewn timber here is firm at 12 cents per cubic foot; hewn oak, 18 to 20 cents per cubic foot; hewn poplar to average twenty-two inches width, by contract 12 cents per foot. Sawn timber, when placed upon the market, will bring 11 cents per cubic foot, 40-foot basis; contracting, 11 to 11 1/2 cents basis. There is a fair demand for cypress at 5 to 9 cents per cubic foot, according to average. Cedar is in limited demand quoted at 20 to 30 cents per cubic foot. Saw logs delivered at mill, pine \$5 to \$7 per 1000 cubic feet. The following shipments of lumber are reported for the week ending December 27: Steamer Ragna for Montevideo with 1,103,667 feet; bark Ameer for Buenos Ayres, A. R., with 518,316 feet; schooner Scotia for Havana, Cuba, with 360,257 feet, and brig Stacey Clark with 312,000 feet; steamer Rockcliffe cleared for Liverpool with 126,453 feet, and schooner Smith for Belize, B. H., with 60,000 feet—total, 2,480,673 feet. The total shipments from this port for four months ending today amount to 21,065,958 feet, against 20,332,514 feet for the corresponding period last year. The total exports of hewn timber since September 1 amount to 204,275 cubic feet, against 192,075 feet last year, and of sawn timber 980,456 cubic feet, against 905,423 cubic feet for the corresponding period in 1894. Owing to a contemplated rise in the streams from the recent rains, the timber market at Pensacola is unsettled, awaiting larger receipts, so that no definite quotations are given. At Moss Point, Miss., the demand for lumber is fair, with a steady supply of orders. Stocks are generally light, and well sold up.

New Orleans.

[From our own Correspondent.]

New Orleans, La., December 30.

At this period of the season there is very little doing in the general market, and as in all commercial sections of the country the affairs of the year are being wound up and preparations made to enter the business arena of 1896, there is also the same tone existing here. The lumber industry of Louisiana shows a marked improvement over the situation one year ago, and at this writing the outlook both in the yellow pine and cypress market is most promising. A perfect belt of or-

ganized bodies protects the lumber industries of the South in yellow pine, the annual output of this State alone being 400,000,000. Among the companies in which the various sections of this State are interested there is the Mutual Lumber Co., of Mississippi; Arkansas & Missouri Yellow Pine Lumber Co., and the Union Lumber Co. It is thought that this consolidation of interests will prevent the too rapid depletion of forests and maintain prices at a fair margin of profit to the manufacturer. The Alabama Lumber Co. (Limited), organized during the month, will complete the system of yellow-pine organizations, and with the Gulf Coast Lumber Co. to look after foreign shipments, there is a very active movement expected during the coming year. There is very little change in the Louisiana red cypress trade, and production is about stationary at nearly 1,000,000 feet a day, while the demand is quite active, and readily absorbs this amount. There is a better feeling in the export market, with stronger values abroad and a consequent improvement here. With the many improvements going on in this city, and with the superior facilities which are being furnished at Port Chalmette for the exportation of lumber, the present outlook is much more encouraging than for some time past. A prominent official, in speaking of the lumber market, says: "The shippers of yellow pine get better prices, and are still getting them, when they send their lumber to foreign markets than they are receiving, or have received, from local buyers. It has not paid to confine their business strictly to a home market. Cypress lumbermen have held their own better than yellow-pine men. They have maintained their prices better. Yellow-pine men have not seemed to pull together as well as they might. They are now doing much better. Every day the association is growing stronger, and prices are being regulated in a much more satisfactory manner."

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, December 30.

The occurrence of the Christmas festivities does not seem to interfere much with the lumber trade of this section, and a very unusual demand from dealers has been present during the past week. The situation throughout the lumber industry at the close of the year is much more satisfactory than that of a year ago. Of the future of this important trade all experts agree that a steady increase in the demand will be the rule during 1896 both from domestic and foreign sources. The Journal, in its review of the lumber market, says: "The export trade and the promised development of this immediate section during 1896 is expected to consume quite a large proportion of the product of local mills, so that the new year will be begun with cheerful anticipations. In addition to the export shipments through Sabine Pass, it is expected that the completion of the Gulf & Interstate Railroad will open a demand for lumber for parts of cargoes of vessels clearing from Galveston." There is a light demand at this period of the season for yard stock, which, after stock-taking, will improve. The demand for railroad timber has not yet materialized, but after the opening of the year a very important and active demand is expected. As to prices, they still continue firm, with a hardening tendency. There is a good demand for shingles, and stocks continue about equal to all present requirements. Among the items of interest during the week, and which has been the topic for discussion among lumbermen, is the big lumber order placed at Orange last week. The Litcher & Moore Lumber Co. has been awarded

the contract for 8,500,000 feet of all-heart yellow pine. The order was placed by the Northwestern Elevated Railway Co. at Chicago. The Litcher & Moore Lumber Co. furnished last week the cargo of the schooner Carrie Strong, consisting of 400,000 feet of lumber, for Vera Cruz. Among the foreign shipments reported from Sabine Pass is the schooner Mary Sanford, loaded by the Reliance Lumber Co., with 438,353 feet of rough and dressed lumber, which sailed a week ago for Jamaica. The schooner Viva, loaded by the Reliance Company, will clear in a few days for Montevideo; the schooner Signe will load for Tampico, and the A. Denike is now on her return trip from Tampico and will reload for the same port under charter with the Consolidated Export Lumber Co.

St. Louis.

[From our own Correspondent.]

St. Louis, Mo., December 28.

Although the volume of transactions in lumber are light at present in this market, the trade is much better than for the corresponding period last year. The yellow-pine business is rather light, which is usual at this time of year. Out-of-town parties, however, are locating stocks, and the inquiries during the past week from the Eastern and Central States have been numerous. Mills are generally determined to maintain prices and curtail production, so that buyers cannot expect that prices will go lower during the winter. On the contrary, there is every prospect of a slight advance. The white-pine trade is dull, especially the movement with out-of-town buyers, while the local trade continues of fair volume. Stocks on hand are generally well assorted, and all preparations are being made for a good demand in the spring. The recent phenomenal rise in the river is one of the chief topics of interest among lumbermen, and last week's receipts were very heavy. The effect on the local white-pine yards, it is thought, will not be serious. In hardwoods there has been a fair volume of transactions during the past week, and in this branch of the lumber industry there is more activity than any other. Stocks are generally light, and mills are all filled with orders. The recent rise has brought down an immense lot of hardwoods that has been tied up on account of low water. Stocks of oak are light, with prices very firm and market quiet, especially for quartered oak. In poplar trade is fairly active, with stocks of uppers short, but with a good supply of common grades. There is a fair movement in cottonwood, and a number of large transactions are reported. There has been a fair demand for ash, and dealers are laying in large stocks in anticipation of a good demand next year. Other hardwoods are fairly active, with values very steady.

Southwestern Lumber Shipments.

The lumber interests of the Southwest have become so important that Northern lumber journals are devoting considerable space to them. In a recent issue the Chicago Lumberman gives some facts relative to the territory adjacent to Sabine Pass, where the channel is being deepened, as already stated in the Manufacturers' Record.

In referring to the business transacted, the Lumberman says:

"An imperfect idea of the importance of Sabine Pass to the lumber manufacturers of Southeast Texas may be aduced from a statement of the export business done through that port since January 1, 1895, by the Litcher & Moore Lumber Co., of Orange; the Consolidated Export Lumber Co., and the Reliance Lumber Co., of Beaumont. Since the beginning of this year these concerns combined have ex-

ported a total of 20,715,985 feet of yellow-pine lumber. Of this the Consolidated Export Lumber Co. shipped 6,606,674 feet to Mexican ports, 3,919,466 feet to Brazilian and South American ports, 2,312,809 feet to Eastern ports, or a total of 12,838,949 feet; the Litcher & Moore Lumber Co. 1,240,979 feet to Mexican ports, 1,840,891 feet to Eastern ports, 104,748 feet to the Brazos river, Texas—a total of 3,186,618 feet; Reliance Lumber Co. 1,960,619 feet to the West Indies islands, 2,729,999 feet to Mexican ports—a total of 4,690,618 feet. The shipments do not include three cargoes now being loaded at Sabine Pass.

"These figures represent only a small per cent. of the cut of six mills, but are sufficient to indicate the possibilities of the export business and the advantages that accrue to the manufacturers who have new and profitable markets opened to them by virtue of this port. The facilities for exporting lumber are not yet what they should be, however, nor what they would be if a ship channel was opened across Sabine lake. Beaumont and Orange are located on rivers that are broad and sufficiently deep to float the largest ocean vessels, but Sabine lake, into which they flow before the water gets to Sabine Pass and out to the Gulf, is a body of water so shallow that profitable navigation is impracticable, if not impossible. Neither Beaumont nor Orange is more than thirty miles from the port of Sabine Pass, but this lake obstruction makes it necessary for the manufacturer to either ship his product to the Pass by rail or barge it to the ship's side, which is an expense that materially interferes with the export of lumber with profit to the millman. Just at present hopes are entertained that the government will dredge a channel across the lake."

A Heavy Order for Yellow Pine.

An unusually large order for yellow pine has been awarded to the Litcher & Moore Lumber Co., of Orange, Texas. The order is for 8,500,000 feet of all-heart yellow pine, and was placed by the Northwestern Elevated Railway Co., of Chicago. It is to be shipped by water to New York and by rail from that point to Chicago.

Lumber Notes.

Messrs. Deal & Davis, of Pleasant Shade, Va., have erected a new saw mill of 25,000 feet capacity per day.

The Hagerman Lumber Co.'s saw mill, near Mariana, Fla., was destroyed by fire about two weeks ago. The mill was insured, but to what amount is not known.

Whybark's saw mill, located near Arthur City, Texas, was burned on the 22d ult. The plant was the property of the Druehrle Hardwood Co., of St. Louis. The loss is supposed to be total. Insurance not known.

The receipts of lumber at the port of New Orleans for the week ending December 26 amounted to 1,455,600 feet, and since September 1, 1895, the receipts amount to 40,037,100 feet, against 20,004,974 feet for the corresponding week last year.

The work of clearing a site for the erection of the sash, door and blind factory at Palatka, Fla., commenced last week. Mr. G. B. Seldon, the projector of the enterprise, left Palatka on the 25th ult. for the purpose of purchasing lumber to build the factory.

Several lumber manufacturers of the Northwest were in Jacksonville, Fla., and Ferdinandina last week prospecting for a location for their saw mills. Mr. John Paul, one of the most extensive lumber manufacturers of Oshkosh, Wis., is with the party. He has for a long time owned

some of the finest tracts of virgin pine to be found in Florida.

The Oxley Stave Co., of Chattanooga, Tenn., is furnishing large shipments of staves to the Standard Oil Co. at Cleveland, Ohio. The company manufactures oil-barrel staves almost exclusively. The staves are manufactured, kiln-dried, jointed and distributed from Junction City, Ky.

The schooner Carrie B. Strong arrived at Sabine Pass on the 25th ult. to load with lumber for Vera Cruz. Her cargo will consist of 400,000 feet of material to be used in the government work in the harbor of that port. The lumber will be furnished by the Litcher & Moore Lumber Co., of Orange, Texas.

It is stated that the volume of business done by the Loomis-Hart Manufacturing Co., at Chattanooga, Tenn., exceeds in volume that of 1893 or 1894. For the past few weeks the rush of orders from Ohio and Texas has been so great that it has worked its hands extra hours in order to fill them promptly.

An inspector of logs for the Loomis-Hart Manufacturing Co., of Chattanooga, Tenn., has been dispatched by the company to the headwaters of the Tennessee river to inspect logs. The Loomis-Hart Company has several million feet of logs ready to float out on the first rise, which it anticipates about January 20.

The Commercial Lumber Co., of Gilmer, Upshur county, Texas, was chartered on the 24th ult. with a capital stock of \$100,000. The company will engage in the manufacture and sale of lumber and building material of all kinds. The incorporators are A. L. Clark, of Smith county; S. Wilkins and M. E. Sullenberger, of Upshur county.

A large land deal was made recently in Jackson county, Florida, embracing 13,000 acres of land near Chipley. The sale was made by Col. W. D. Chipley for the Florida Land, Gulf & Development Co. to H. B. Halton, of Pensacola. Mr. Halton is operating a lumber mill near Chipley, and will eventually convert the forests of yellow-pine trees into lumber.

Among the vessels clearing from Brunswick, Ga., last week were the schooner Lucy H. Russell for Perth Amboy, N. J., with 21,252 cross-ties, the largest cargo of ties shipped during the year. The schooner Rebecca F. Lamdin sailed for Boston with 363,000 feet of lumber, and the Schooner Helen F. Martin for New York with 335,000 feet of lumber.

Mayor S. T. Prince, one of the receivers for the Seaboard Manufacturing Co., of Mobile, Ala., states that plans are under way to start up the plant at Fairfield, Ala., by the 1st of January if possible. Mr. L. E. Spotswood has been appointed superintendent of the Seaboard Manufacturing Co. by the receivers, which is the position he formerly filled with the company.

The wood-alcohol plant at Round Mountain, on the Chattanooga Southern, some twenty miles from Gadsden, Ala., is about completed, and will be put into operation in a few days. The plant was erected by the Gordon Chemical Co., of Cincinnati, Ohio, at an expense of over \$100,000. The plant will consume over 150 cords of wood per day, and employ about 125 men.

Among the clearances from Pensacola, Fla., last week the following vessels were reported: Steamship Strathmay for Amsterdam and London with 188,895 feet of sawn timber, 356,000 feet of lumber and 1683 cubic feet of pickets; the schooner James W. Fitch for Philadelphia with 112,000 feet of lumber, and bark Lacaruna for Lisbon with 560,000 feet of sawn timber.

Messrs. J. J. & F. A. Flowers, two prominent lumber manufacturers of Bowling, Ala., have been prospecting in the vicinity of Blakely, Ga., with a view of locating a large saw mill plant. They propose, if their plan succeeds, to establish in or near Blakely a large mill employing 200 hands, and to extend on southward into the timber belt a tram railroad several miles in length.

The timber merchants of the port of Pensacola, Fla., are much elated over a decision recently made in an English court. Heretofore the rule has prevailed in England in regard to cargoes of timber and lumber to hold the shipper responsible for any shortage that might be found to exist upon unloading a vessel. This decision places the responsibility for shortage upon the vessel, as the captain is required to sign all bills of lading at the port of shipment.

The dogwood and persimmon timber in Oconee, S. C., is now being used in the manufacture of shuttles for cotton factories. The Southern Shuttle & Bobbin Co., of Westminster, S. C., commenced operations several weeks ago, and samples of the work have been pronounced first-class by competent judges. Mr. Edward G. Spalding, of Westminster, is president of the company, and Mr. Y. E. Pitts, secretary and treasurer. It is stated that this is the only factory of the kind in the South.

It is stated that one of the largest bills for yellow-pine lumber is now out for bids from Southern mills. The material is for constructive purposes for the Northwestern Elevated Railroad Co., Chicago, which is building an extensive system of lines in the northern portion of that city. The schedule is as follows: Ties, 4,100,000 feet; guard rails, 2,400,000 feet; shims, 60,000 feet; roadway joists, 800,000 feet; platform facing planks, 700,000 feet; furring, 20,000 feet; platform flooring, 125,000 feet. The successful bidder will be required to furnish a surety bond of \$75,000 for the fulfillment of his contract.

The Indiana Retail Lumber Dealers' Association will meet in Indianapolis, Ind., on January 21. After the business of the convention has been transacted the members of the association, 200 strong, will leave for New Orleans, where they will remain several days, and will look into the lumber interests of the State. A little later the Union Association of Retail Lumbermen, an association which embraces the States of Ohio, Pennsylvania and New York, 400 strong, will stop en route to New Orleans at Memphis and Vicksburg. The first party will reach New Orleans over the Queen & Crescent Railroad. The second will arrive over the Yazoo & Mississippi Railroad.

The Hilton & Dodge Lumber Co., of Brunswick, Ga., is putting all its plants in first-class condition. The company will shortly purchase entire machinery for a first-class circular saw mill, and will add new boilers and an engine to its other plants. The company owns extensive mills at Darien, Brunswick and St. Mary's, Ga. The destruction by fire of the company's fine cypress mill at St. Simon's Island, together with about 4,000,000 feet of lumber, has somewhat disarranged its plans. It is stated that the company will rebuild this mill. The new Taylor cypress mills at Brunswick have begun operations on a three years' contract for the Hilton & Dodge Lumber Co.

An important meeting of Southern manufacturers of yellow poplar was held in Cincinnati, Ohio, last week and an organization formed that promises a strict uniformity of grade and a standard price

that will be fair to the producers of all sections alike. The meeting was largely attended and embraced between 60 and 70 per cent. of the manufacturers of yellow poplar. The officers elected were as follows: S. Lieberman, president; J. B. Thomas, general manager; A. H. Wineberger, secretary, and R. S. Hart, treasurer and vice-president. The poplar men in the company represent the States of Kentucky, West Virginia, Ohio and Tennessee. The company will be known as the Southern Yellow Poplar Lumber Co., with headquarters in Nashville, Tenn.

A meeting of the Mechanics, Dealers and Lumbermen's Exchange was held last week in New Orleans, when the various annual reports were read and received. President I. H. Aitkin presided, and Secretary Charles E. Dirmeyer officiated in his usual capacity. The outlook for the coming year promises a large increase in membership. The quotation committee stated that prices on lumber have shown but few fluctuations. The demand has been reasonably fair, but as a rule the manufacturers and dealers have been able to respond to any demands made upon them. Lumber for export has shown some improvement. The trade, owing to the harmony and good understanding among dealers, has maintained a firm attitude, and the committee safely pronounce this particular branch of commerce to be in a safe, sound and healthy condition.

Mr. N. K. Fairbank, of Chicago; Messrs. E. K. Willard and T. D. Hooper, bankers, of New York; Gen. T. M. Logan, of Richmond, Va., and others have organized at Richmond the Piedmont Gold Belt Chartered Co., with a capital stock of \$2,000,000, for the purpose of developing on an extensive scale large gold-mining properties covering several thousand acres in Buckingham county, Virginia. These Northern and Western capitalists, it is reported, have made a thorough investigation of the gold-bearing ores of that territory, and have found such remarkably favorable conditions that it is claimed they have secured control of the entire district, and that their operations will be very large. Investigations of experts and analyses of the ores, it is claimed, show that the average of these ores gives a much better percentage of gold than either the South African or the Cripple Creek districts. This is thought to be one of the most important gold-mining operations which such prominent capitalists of the North and West have ever undertaken in the South. The company is organized on the basis of controlling the entire territory and subletting its mining interests in part to subsidiary companies.

Mr. J. F. Jordan, of Greensboro, N. C., one of the purchasers of the Greensboro Iron & Steel Co.'s property, in a letter to the Manufacturers' Record, says: "The property was sold to some four or five of Greensboro and North Carolina people, they to allow any of the stockholders of the old company the privilege of coming into the new company within thirty days for an amount not to exceed their interest in the old company. At the end of thirty days from the date of sale steps will be taken to put the furnace in blast right away." This furnace was built several years ago, but about the time it was completed the panic interfered with the operations of the company and the plant has never been in operation. The success of this furnace would have a very material effect upon the development of the iron ore region between Greensboro, N. C., and Blacksburg, S. C., and it is to be hoped that the purchasers will promptly blow it in and thus make a full test.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., January 2.

In the local phosphate market there is very little trade reported, and manufacturers are not purchasing in large quantities. The receipts are generally light, and for the past year there is a decrease shown in the total amount received. During the past year the receipts of South Carolina phosphate rock in the local market amounted to 53,351 tons, and of Florida rock 28,769 tons, making a total of 82,120 tons, against 94,346 tons for 1894, of which 23,494 were Florida and 70,852 South Carolina. The market at points of production in South Carolina is moderately active, with prices a shade firmer at Charleston. The quotations are: Crude, \$2.75 to \$3 delivered at the mines; hot-air-dried, Ashley river alongside vessel, \$3.10 to \$3.25, and at city alongside vessel, \$3.25 to \$3.35; ground rock, \$5 to \$5.50 in bulk. In Florida prices are nominally steady at 8 to 8½ cents a unit for land pebble delivered at Eastern ports. Land rock is firm at 6½d., and pebble at 5½d. to 6d. for foreign ports. Prices for Tennessee phosphate are firm, and a shade higher than a month ago; quoted now at 9½ to 10 cents a unit for high-grade rock, with quotations f. o. b. Centreville \$3 to \$3.25 a ton. The receipts of Tennessee phosphate rock in the local market during 1895 were 560 tons, and of Navassa phosphate 1200 tons. The New York charters reported during the past week are as follows: A schooner, 919 tons, from Fernandina to Baltimore with phosphate rock at \$1.80; a British steamer, 1400 tons, from Tampa to Hamburg, Germany, with phosphate at 18s., chartered abroad, and a British steamer, 2281 tons, from Tampa to Rotterdam with phosphate at 17s., chartered abroad.

Fertilizer Ingredients.

The movement in ammoniates in the local market has been light during the week, owing to the occurrence of the holidays. In the West stocks continue light, and values steady. Blood is quoted \$1.50 to \$1.55 f. o. b. Kansas City and Chicago, and concentrated \$1.40 to \$1.45 f. o. b. same locality; 9 and 20 tankage, \$11.50 to \$12 Kansas City, and \$12 to \$13 Chicago. Sales of 9 and 20 tankage are reported at \$1.50 and 10 delivered East, shipments over the next four months. Messrs. Thos. H. White & Co. in their December circular say: "There has been no change of importance in the market for ammoniates since our advices of the 1st ult. The demand has been equal to the monthly supply, and no great accumulation or pressure to sell exists."

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	\$2 50¢	—
Sulphate of ammonia, bone.....	2 50¢	—
Nitrate of soda.....	1 80¢	1 85
Hoof meal.....	1 80¢	—
Blood.....	1 80¢	1 85
Azotine (beef).....	1 80¢	—
Azotine (pork).....	1 85¢	—
Tankage (concentrated).....	1 80¢	—
Tankage (9 and 20).....	1 50 and 10	—
Tankage (7 and 30).....	17 00¢	17 50
Fish (dry).....	20 50¢	—
Fish (weld).....	12 00¢	—

Phosphate and Fertilizer Notes.

The schooner J. S. Winslow arrived at Port Tampa on the 23d ult., and will take out a cargo of phosphate rock.

Mr. Wm. H. Bunton, of Boston, Mass., has been appointed treasurer and selling agent for the Bone Valley Phosphate Co., whose works are at Lakeland, Fla.

It is stated that there are now fifteen fertilizer factories in North Carolina. Of these, the Durham and Navassa are said to be members of the newly formed Virginia-Carolina Chemical Co.

Mr. Gus Gudehus, a prominent phos-

phate shipper, of Ocala, for one of the largest companies in Europe, has just completed loading the steamship Marie at Fernandina with 2500 tons of phosphate rock.

The privilege tax for the sale of fertilizers in South Carolina is beginning to be paid in to the treasurer. The amount already paid in amounts to \$372.50 for tax tags purchased for the trade that has just commenced.

The schooner Star of the East, which sailed on the 23d ult. from Fernandina for New York, took on her cargo in a very short time. She was loaded with 1350 tons of phosphate in fifteen hours, which breaks the record for quick work.

A deposit of phosphate, said to be of great extent, has been discovered near High Springs, Fla., and a new plant is being erected. Work has commenced upon the Trenton Phosphate Co.'s plant near the Suwanee river by a force of carpenters and machinists, who will put the plant into good shape. Mining will commence in earnest in a few days.

The shipments of phosphate rock from the port of Charleston, S. C., for domestic ports for the week ending December 27 were as follows: Schooner George R. Congdon for New York with 613 tons; schooner Mary Curtis for Richmond, Va., with 610 tons, and schooner D. K. Baker with 749 tons. The schooner Addie B. Bacon cleared for Cooper's creek with 160 tons. The total clearances since September 1 amount to 36,017 tons, against 28,579 tons last year.

Among the vessels leaving Port Tampa last week were the Australian steamship Betty on the 24th ult. for Venice via New Orleans with 2270 tons of phosphate from the Franco-American Phosphate Co., and the bark Havana for Philadelphia on the 26th ult. with 800 tons of phosphate from the Bone Valley Phosphate Co. The steamship Glenfield arrived at Port Tampa on the 26th ult. from St. Thomas for 2800 tons of phosphate from J. H. Packard, and the British steamship Marion from Philadelphia for a cargo of phosphate.

The hard-rock phosphate miners in the Fort White and High Springs phosphate district of Florida have signed an agreement to shut down their works on the 1st of January, providing three-fourths of the miners in the hard-rock district agree to the same. They also agree not to sell any rock already mined for less than \$4 net f. o. b. cars at the mines, except to fill contracts already made. It is stated that about 100,000 tons have been mined in the hard-rock district and not shipped. How much has been sold and will be shipped after January 1 is wholly a matter of conjecture.

The shipments of phosphate rock from the Tennessee phosphate mines were rather light during the month of November, owing partly to the scarcity of cars and the inclemency of the weather. The shipments for November amounted to 4060 tons, and the production for the month 3285 tons. Stocks on hand December 1, 4525 tons. The list of mining companies in the field on December 1 was as follows: Duck River Phosphate Co., Hickman Phosphate Co., Lewis Phosphate Co., Southwestern Phosphate Co., Standard Phosphate Co., Swan Creek Phosphate Co. and Tennessee Phosphate Co.

Messrs. Knox & Wood, of Demopolis, Ala., have determined to build twenty-five barges for transporting coal on the Warrior river in that State.

Nearly thirty miles of improved roadway have been completed in the vicinity of Savannah, Ga., within the last six months.

Iron Markets.

Cincinnati, December 28.

The extraordinary expansion of the pig-iron trade during the summer and early autumn received its impetus largely from the increased demand for Bessemer iron. There seemed scarcely a possibility of supplying the demand, and the price of Bessemer rose until it became profitable to import it, and contracts were made for large quantities of foreign ores which were brought over, and idle furnaces put in operation to produce the metal sold ahead at a good margin of profit. The largest manufacturers of steel products, such as steel rails, billets, plates, structural material and street rails, were flooded with orders, and buyers, feeling the stimulus of the recognized activities, willingly agreed to accept any deliveries the mills could make. The general sentiment was that good times had come again and an era of business revival had been ushered in. While all this excitement was on, and the advances that inevitably accompanied it, obtained, there were conservative minds that were unable to comprehend it all and did not participate in the belief that general prosperity was immediately ahead, as mercantile business, aside from the metal interests, gave no hint of sympathetic development, and the conditions of the national revenues and reserves were definitely unfavorable. When it suddenly became difficult to sell Bessemer pig, it was simultaneously discovered that many of the mills had anticipated their wants too liberally, and it was revealed that through about three months there had been a very extraordinary cumulation of orders for building materials, street-car equipment, bridge iron, wire rods and the like, and that fresh orders were not forthcoming. The demand for manufactured products fell off abruptly, and the mills found no use for the surplus supplies of raw material being delivered to them so bountifully. The decline in Bessemer carried down with it the ordinary foundry and mill grades, as it had carried them up with its wonderful advance, though the advance in common or non-Bessemer irons had not culminated at so high an altitude.

An adjustment is rapidly going on and the equilibrium of the market will be soon established again. In the meantime the market is unsettled and sales are being made through separate and distinct negotiations, as each important deal is presented.

The Southern schedule of prices maintained so well since August has been virtually abrogated.

The inflation of prices on non-Bessemer irons was not excessive and the reaction is therefore less severe on such producers. Many important transactions will mark the close of the year, as at prices obtainable for early and extended deliveries no serious loss is possible and large gains in value are altogether probable.

Money is easy and collections continue very good.

We quote cash f. o. b. cars Cincinnati:

Southern coke No. 1 fdy.....	\$12 00¢	\$12 50
Southern coke No. 2 fdy.....	11 50¢	12 00
No. 1 soft.....	11 75¢	12 25
Lake Superior coke No. 1.....	14 00¢	15 00
Lake Superior coke No. 2.....	13 50¢	14 50
Hanging Rock charcoal No. 1.....	16 00¢	17 00
Tennessee charcoal No. 1.....	13 50¢	14 00
Jackson county silvery No. 1.....	14 00¢	15 00
Southern coke, gray forge.....	10 75¢	11 25
Southern coke, mottled.....	10 25¢	10 75
Standard Alabama car-wheel.....	15 75¢	16 25
Tennessee car-wheel.....	14 50¢	15 00
Lake Sup. car-wheel & mall'e.....	16 50¢	17 50

St. Louis, December 28.

The year closes with a dull market, and prices are temporarily demoralized.

On January 1, Connellsville coke will advance 20 per cent. of its present value, which will tend to further increase the cost of iron and steel products.

All branches of the foundry industry report a fair volume of business, and

there is a hopeful feeling that the first quarter of the new year will lay the foundation of an improved condition of trade.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$13 25	\$13 50
Southern coke No. 2.....	13 00	13 25
Southern coke No. 3.....	12 75	13 00
Southern gray forge.....	12 50	12 75
Southern charcoal No. 1.....	14 50	15 00
Ohio softeners.....	15 50	16 00
Lake Superior car-wheel.....	17 00	17 50
Southern car-wheel.....	16 50	17 00
Genuine Connellsville coke.....	—	5 45
West Virginia coke.....	—	5 00

Chicago, December 28.

Some large buyers have been ready to place their orders for the first six months of the year, but at prices below what the furnace companies care to entertain.

This condition of things, of course, has resulted in light sales, consisting mostly of sorting up orders and orders ranging from fifty to 100 tons to tide over until prices reach a settled basis.

The recent war scare and the condition of our national gold reserve tends to keep buyers in an uncertain and timid state, and it is doubtful if any buying of note will take place until things in general straighten out and values find a level.

We quote as follows f. o. b. cars Chicago:

Lake Superior coke No. 1 fdy.....	\$14 50	\$15 00
Lake Superior coke No. 2 fdy.....	13 75	14 00
Lake Sup. charcoal Nos. 1 to 6.....	15 00	—
Ohio Scotch No. 1.....	15 00	15 50
Jackson Co., O., silvery No. 1.....	14 50	15 00
Alabama silvery No. 1.....	14 00	15 00
Spathite.....	14 00	14 50
Southern coke No. 1 foundry.....	13 25	13 50
Southern coke No. 2.....	12 75	13 00
Southern coke No. 3.....	12 50	—
Southern coke No. 1 S.....	13 00	13 50
Southern coke No. 2 S.....	12 50	13 00
Mannite.....	13 50	14 00

Buffalo, December 28.

Under the lower range of values for Northern irons, buyers whose old contracts expired with the year have been freely covering their requirements for the coming season, so that the week shows business in the Eastern field aggregating a considerable tonnage. There has been inquiry for favorite Southern brands, but very few trades of any size consummated for them. The majority of consumers are not in the market, and were it not for some of the larger transactions above referred to the market would seem dull.

No. 1 foundry strong coke iron.....	—	\$13 50
Lake Superior ore.....	—	13 00
No. 2 foundry strong coke iron.....	—	14 50
Lake Superior ore.....	—	14 00
Ohio strong softener No. 1.....	—	14 00
Ohio strong softener No. 2.....	—	14 00
Jackson county silvery No. 1.....	\$16 25	17 00
Southern soft No. 1.....	—	14 75
Southern soft No. 2.....	—	14 50
Hanging Rock charcoal.....	—	17 50
Lake Superior charcoal.....	—	16 00

Philadelphia, December 28.

Unfortunately for the great iron world, the speculators who bought Bessemer iron and steel billets some four months ago, just as the "common herd" buy railway stock, by putting up a margin, have been compelled to unload during the quiet month of December. Hence we hear of some low sales of said speculation lots. The average furnaceman is filling his old contracts and need not bother about new business until February or March. The present indications point to a heavy business during 1896.

We quote for cash f. o. b. Philadelphia:

No. 1 X standard Alabama.....	\$13 00	\$13 25
No. 2 X standard Alabama.....	12 50	12 75
No. 1 X standard Virginia.....	13 00	13 25
No. 2 X standard Virginia.....	12 50	12 75
No. 1 X Alabama or Virginia.....	12 75	13 00
No. 1 X lake ore iron.....	15 00	15 50
No. 2 X lake ore iron.....	14 50	15 00
Lake Superior charcoal.....	17 00	17 50
Standard Georgia charcoal.....	17 50	18 00

New York, December 28.

New York has been the centre of stirring events in the past week. The financial world has been righting itself after one of the rudest shocks of modern times. The recovery has been rapid, but scars are left. It is recognized that the future prosperity of general business, on which, of course, the iron business rests, is clouded. How fast will the clouds clear away? Views differ, but the hopeful view prevails. Owners of money were scared to see the country's greatest creditor thoroughly mad and recklessly selling American securities and calling loans.

But John Bull's mad is pretty well under the control of his pocket-book. And so is Uncle Sam's. Where a telescope fails to reveal clearly a great principle in the Venezuelan sky, it is dead sure neither people will fight very long. So the war is over.

But the national finances remain. There will be hesitation until wholesome legislation is enacted. Congress stands ready with measures. Will the President allow them to become a law?

Of course the iron market continues sluggish, and no activity is looked for until January has fairly opened. Then the question is whether buying will be liberal or hand-to-mouth. In either event, there will be improvement in volume, for stocks are running low. Prices continue to shrink, and have already reached a point which means steady curtailment of production.

We quote for cash f. o. b. docks New York:

No. 1 X standard Southern.....	\$13 00	\$13 25
No. 1 X choice Virginia, such as Shenandoah.....	13 00	13 25
No. 2 X Alabama or Virginia.....	12 50	12 75
No. 1 soft Alabama or Virginia.....	12 75	13 00
No. 1 X lake ore coke iron.....	15 00	15 50
No. 2 X lake ore coke iron.....	14 50	15 00
Lake Superior charcoal.....	17 00	17 50

ROGERS, BROWN & CO.

A New Cigarette Machine.

Durham, N. C., December 30.

Editor *Manufacturers' Record*:

In a recent Louisville paper there is a report of an exhibition in that city of a cigarette machine, which is said to be such a phenomenon that the paper deemed it of sufficient interest to devote a column to describing its workings, which it calls a revelation, and which it says is destined to bring about a revolution in the existing system of cigarette manufacture. The paper takes the ground that any speedy machine which may be worked by a small fraction of a horse-power or by hand, and which at the same time is a mere toy in size and of great simplicity in construction, is sure to transfer the making of cigarettes from the few big establishments, which alone can afford big machines, to the many small cigar and tobacco factories which would long ago have made their own cigarettes had an inexpensive machine been placed within their reach.

The writer has for years studied the cigarette situation, and concurs in the position taken by the Louisville paper, but doubts whether the real merits of the alleged revelation come up by even one-half to what is claimed. If so, this machine ought to be worth millions of dollars to the tobacco interests of the country, without regard to the immense value to those who control it. The allegation that a machine weighing less than 100 pounds will make 200 cigarettes a minute, or 120,000 per day of ten hours, is hard to accept when it is remembered that the utmost capacity of the Bonsack machine is only 80,000 a day.

It is also stated that this new machine will turn out cigarettes made of granulated tobacco. If this be true, it will, indeed, create a revolution, for a granulated cigarette (the tobacco being first sprinkled with some adhesive liquid) will be not only a novelty, but will meet a demand commensurate with the number of people who prefer granulated smoking tobacco to long cut. But here another proposition difficult to accept is presented to practical men, for there never has been a cigarette machine which would feed granulated tobacco, and if such a one has been invented it antagonizes all existing theories.

The writer does not deny that such an invention is possible. He only hopes that it has been perfected, for a cigarette-machine that will enable the smaller manufacturers of cigarettes and of cigars and

smoking tobacco to make their own cigarettes at lower price than they have to pay to the big combines will be the means of keeping millions of dollars at home which now go away annually to the coffers of concerns already rolling in wealth. Therefore, the "small fry" among Southern manufacturers will watch with interest any reliable information concerning the practical workings of what they can but regard, if it proves a success, as a boon to their business. As the *Manufacturers' Record* is looked to as an authority on everything that concerns the welfare and progress of the South, the writer respectfully suggests that you investigate and give to the public the facts in regard to this seemingly incredible "revolutionizing" story which is going the rounds from the Louisville paper.

"LEAF TOBACCO."

[Note. The *Manufacturers' Record* is informed that the cigarette machine referred to has been for many months in process of development, the principle having from the start met with the approval of experts, but by reason, it is claimed, of the stupidity of the mechanics who have had it in hand, the working models have not until recently given satisfaction to the owner of the invention. However, it is reported that the Louisville machinist, who very recently overhauled the particular working model which was relied upon to demonstrate the value of the invention, discovered some very gross miscalculations in construction, which, being remedied, resulted in the "revelation" which "Leaf Tobacco" inquires about. If the report of the correspondent at Louisville who has seen the machine work be correct (and it doubtless is entirely trustworthy), confirming the report of the Louisville papers, the new cigarette machine on exhibition there seems destined to produce a very important revolution in the system of cigarette manufacture. It is, moreover, claimed for the machine in question that by reason of its ability to work granulated tobacco it will give to the public a cigarette of natural purity, which is probably of far greater importance than mere economy in production or even the distribution of this industry from the big factories to the little ones. From the best information obtainable, the merits of this invention do not seem to be overstated in the description which appeared in the Louisville Evening Post.]

TRADE NOTES.

A gold medal was awarded at the Atlanta Exposition to the Atlanta Terra Cotta Co., Atlanta, Ga., for its exhibit of terra-cotta statue and pedestal. This concern manufactures artistic terra cotta, and its work is attracting praise wherever such ornamental creations are used. The growth of its business evidences keener appreciation for the many artistic combinations produced.

"Truths to Know When Buying Boilers." This is the title of an instructive chapter of a pamphlet issued by the Hogan Boiler Co., Middletown, N. Y. Another chapter states the proofs to have when buying boilers. Boiler users will find this pamphlet an interesting contribution to boiler literature. The statements are accompanied by facts and figures collected from actual experience, and each assertion is made in a logical and forcible style. The data given is crisp and pointed, and does not require scientific education to comprehend.

Requirements in the essential elements of fuel and labor economy, smoke prevention and efficiency seem to be fully met by the furnaces of the Brightman Furnace & Stoker Co., Cleveland, Ohio. No mere mention of this is, however, called for, as the objectless being daily shown by these furnaces in the works of leading concerns furnishes determining evidence. Recent installations show that many successful and well-known establishments are adopting them. Among these installations are the following: Buffalo State Hospital, Buffalo, N. Y., in connection with four Fitzgibbons patent vertical marine boilers, rated at 200 horse-power each, which are developing far in excess of

their rated capacity; B. F. Goodrich Co., Akron, Ohio, under one 300 horse-power stirring boiler; Goodrich Hard Rubber Co., Akron, Ohio, under two 150 horse-power horizontal tubular boilers; Badger Paper Co., Kaukauna, Wis., in connection with horizontal tubular boilers; Anaconda Mining & Smelting Co., Anaconda, Mont., with 2700 horse-power Helme boilers, second order; Tradesmen's National Bank, Pittsburg, Pa., with 300 horse-power Geary water-tube boilers.

As the most interesting engineering work being carried on in the world, the Chicago main drainage canal affords an interesting exposition for contractors' machinery. The visitor to this canal is at once impressed by the great number of travelling cableways. As built by the Lidgerwood Manufacturing Co., of New York, they are to be found on nearly all the rock sections of the canal. On section two McArthur Brothers use two cableways; on section three the Des Plaines Construction Co. use four; on section four McArthur Brothers use two; on section five the Quailley Construction Co. use two; on section six Mason, Locher & Williamson use four; on section seven Locher, Harder & Williamson, one; on section eight Mason & King, three, and Locher, Harder & Williamson, two. The only reason why about ten more cableways were not installed on this work was because the travelling cableway was not perfected in time. A fact presented is, that since the travelling cableway demonstrated its present capacity, no other hoisting and conveying machine was sold on the canal. Nineteen cableways can be seen in daily operation; in fact, working night and day. The travelling cableway is capable of handling 600 cubic yards of rock in place per day of ten hours, and any capacity short of that is said to be due to the difficulty of loading the skips.

A visit to the works of the Ball Engine Co., Erie, Pa., impresses one with the idea that prosperous times have certainly returned. A scene of activity is presented to the eye, as every department of this very complete works seems to be on the jump. It was learned that the works have been operated on night turn since last June. The erecting floors are crowded with many engines in various stages of construction. Especially noticeable are the large number of engines arranged for direct connection to dynamos. A large share of the engines built by this company are for that style of machine. The company is building engines especially for electrical service, and in the last four years every engine turned out of the works was used for electric power transmission in some form or other. Among the engines in process of construction are: One 400 horse-power horizontal side-crank engine, arranged for direct connection to Westinghouse, being the first of three for the Apollo Iron and Steel Works at Vandergrift, Pa.; one 350 horse-power engine for the Edison Electric Co., of New Orleans; 300 horse-power vertical compound engine for the Los Angeles (Cal.) street railway; also a number of engines for the Troy Iron & Steel Co., Troy, N. Y.; Mabley Building, Detroit, Mich., and various parts of the country. The company has orders in hand for a number of months to come, and reports an enormous amount of inquiry for this time of the year.

The growth of the railway equipment business, despite the small new construction of the past year, is remarkable. What one of the leading concerns in this trade is doing shows that progressive methods and superior goods will bring business in all seasons. This concern, M. Mitschun & Co., Detroit, Mich., during the past few months filled a large number of important orders. Among them were the following: Henry Starke Land & Lumber Co., Arcadia, Mich., twenty-four standard-gauge logging cars; rails for the new Grand Haven Street Railway Co., Grand Haven, Mich.; rails for the new Epworth League Street Railway Co., Ludington, Mich.; Briggs & Cooper, Saginaw, Mich., six miles of rails, one locomotive and ten logging cars, narrow-gauge; Contractor Geo. E. Currie, Detroit, Mich., two steam motors, one locomotive and twenty cars, standard-gauge; Contractor N. Beckewich, North Tonawanda, N. Y., locomotive, standard-gauge; Clay Lumber Co., of Charleston, W. Va., locomotive, narrow-gauge; Hovey & McCracken, Muskegon, Mich., for Danaher-Melendy Co., Ludington, Mich., sixteen miles of rails, two locomotives and sixty logging cars, all narrow-gauge; Tower Logging Railway Co., of Tower, Minn., thirty-four logging cars, standard-gauge. Other orders included about forty miles of rails and various railway equipment. This firm carries a large stock, and is prepared at short notice to furnish rails of all weights, cars, steam motors and locomotives of all sizes and types, as well as to buy or exchange such equipment.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

ALABAMA.

Alabama—Gold Mines.—Application has been made at Nashville, Tenn., for a charter for the Royal Gold Mining Co., which, it is said, will develop gold mines in Alabama.

Alabama City—Cotton Mill.—The Dwight Manufacturing Co. has completed its mill, and commenced on December 25 with 30,000 spindles and 800 looms.

Birmingham—Car-wheel Works.—Arrangements have been completed whereby N. S. Bonton and other Chicago capitalists will build a plant for the manufacture of car-wheels. Plans for buildings will be made at once, and the plant completed by April 1; to employ sixty skilled workmen at the start, and make 400 car-wheels per day; investment to be about \$100,000 the first year. Malone & Bell closed the negotiations for the plant.

Birmingham—Steel Plant.—The Commercial Club has made a proposition to local land companies whereby a steel plant can be secured, in connection with a recent agreement of Chicago capitalists to invest \$50,000 in same.

Opelika—Knitting Mill.—B. O. Puckett contemplates putting in a knitting mill.*

ARKANSAS.

Little Rock—Tobacco Factory.—D. B. Gilbert will establish a tobacco factory to employ fifty hands.

FLORIDA.

Chipley—Turpentine Works, etc.—H. R. Hutton, of Pensacola, has purchased 13,000 acres of pine lands near Chipley, and has leased same to O'Brien & Carter, of Georgia, who will expend \$10,000 in erecting a turpentine plant and thoroughly developing.

Lake Helen—Starch Factory.—Hurst & Noble have established a starch factory.

Palatka—Electric-light Plant.—The Palatka Gas Light & Fuel Co. has put in a 1000-light dynamo.

St. Augustine—Water Works.—The proposed \$65,000 water works will soon be voted on. Address the city engineer.

Tampa—Soap Factory.—Davies & Rutledge, late of Indianapolis, Ind., have let contract for a three-story building 40x50 feet, and will put in machinery for manufacturing soap.

GEORGIA.

Americus—Cotton Mill.—John L. Harper contemplates starting a cotton mill.*

Atlanta—Machinery Works.—It is said that the American Cotton Picker Co., of Pittsburgh, Pa., T. R. Morris, secretary, will erect machinery works in Atlanta to cost from \$250,000 to \$500,000.

Blakely—Saw Mill.—J. J. & F. A. Flowers,

of Boling, Ala., will build a large saw-mill plant at Blakely.

Columbus—Electric-power Plant.—The Columbus Railroad Co. will expend about \$50,000 to enlarge its plant.

Dublin—Electric-light and Water Works.—The election for water works and electric-light plant will be held January 12; bonds proposed, \$25,000 worth. Address the mayor.

Macon—Sewer System.—The sewer system noted during the week as finally reported, to cost \$130,000, is not proposed, as was stated, but is now about completed. The engineer's report was made so that the city council may accept or reject the system. The system will doubtless be accepted.

St. Simon's Mills—Lumber Plant.—The Hilton & Dodge Lumber Co. will rebuild at once its burned plant; principal office of company in Darlea.*

KENTUCKY.

Ashland—Oil Wells.—Troutman Bros. will drill two oil wells.

Ashland—Coal Mines.—The Ashland Coal & Iron Railway Co. has purchased and will develop 6000 acres of coal lands near Ashland.

Cattlettsburg—Oil Wells.—Troutman Bros., of Pittsburg, Pa., will drill oil near Cattlettsburg.

Cattlettsburg—Steamboat Company.—The Cattlettsburg & Pikeville Packet Co. has been organized with a capital stock of \$6000.

Henderson—Electric-light Plant.—Pierce & Richardson, noted last week as to prepare the city electric-light-plant plans, have an office in the Manhattan Building, Chicago, Ill.

Middlesborough—Coal Mines.—William Pritchard is opening a coal mine.

Owensboro—Wheel Works.—The Owensboro Wheel Co. is putting in new boilers, dust conveyors and other machinery.

Paintsville—Coal Mines.—J. P. Delter, of Chicago, Ill., has purchased 10,000 acres of canal-land lands near Paintsville for \$250,000, and will open mines.

White Post—Planing Mill.—W. A. Harris will increase the capacity of his planing mill.*

LOUISIANA.

New Orleans—Oil Mill.—The New Orleans Cottonseed Oil & Manufacturing Co., Limited, has been incorporated to operate the mill lately built by Lawler & Chaery. W. A. Lawler is president; R. D. Winship, vice-president, and A. V. Chaery, secretary-treasurer; capital stock \$30,000.

New Orleans—Pants Factory.—Chas. Lob, Harry Lurie and others have incorporated the New Orleans Tailor-Made Pants Co., Limited, for manufacturing, with a capital of \$5000.

New Orleans—Creosoting Plant and Saw Mill.—The New Orleans Wood Preserving Works has purchased and is overhauling the Southern creosoting plant; will erect tankage capacity and saw mill.

Patterson—Lumber Mill.—N. B. Trelue & Co. are improving their mill and putting in new machinery, including a nine-foot band mill.

MARYLAND.

Baltimore—Cycle Company.—The Chesapeake Cycle Co. has been incorporated for dealing in bicycles, etc., by James S. Shipley, Charles H. Porter, Albert G. Ripple, George H. Will and Samuel T. Richards. The capital stock is \$5000.

Baltimore—Electric Plant.—The new Edison Electric Illuminating Co., noted last week, is now working on the extension of the plant of the old Maryland Electric Co. This extension is now almost completed, except the machinery, and will double its capacity of 1500 ares and 15,000 incandescent lights, with 300 horse-power motor. The new plant, as extended, will have an aggregate of 2000 horse-power, with all the necessary steam and electric machinery. The plant will be fitted with all the latest improved electric machinery, boilers, engines, etc., of 3000 or more horse-power, as occasion may require, from which the entire business portion of the city will be supplied with light, heat and power by the Edison system.

Baltimore—Bicycle Works.—The Maryland Manufacturing & Construction Co., incorporated last week, will equip a plant for manufacturing bicycles, to be in charge of C. F. Pease, late of Chicago, Ill. The company expects to manufacture 5000 bicycles the

first year. Address S. Davies Warfield, president.

Baltimore—Wire-conduit System.—The city is contemplating the construction of conduit systems for underground wires. N. S. Hill, Jr., is engineer of the subway commission; Alceus Hooper, mayor.

Baltimore—Packing-house.—The Australian Sauce Manufacturing Co. has been incorporated by Harry S. Robinson, Frank H. Salmon, Shields S. Hunter and L. Fulton Bathon, of Baltimore, and Alonzo S. Robinson and Wm. E. Robinson, of Harford county, to conduct a packing business. The capital stock is \$10,000.

Frederick—Shirt Factory.—B. Rosenour & Son have established a flannel shirt factory to employ several hundred hands.

Washington, D. C.—Gas Plant.—A bill has been introduced in Congress to incorporate the National Capital Gas Light, Heat & Power Co. of the District of Columbia. The incorporators are Charles D. Hawk, Francis P. B. Sands, Park Agnew, Anthony Pollock, Rensselaer Stone, Charles C. Bryan and James L. Hastings. The capital stock is not to exceed \$2,000,000, and the company is to operate a gas plant.

MISSISSIPPI.

Heidelberg—Oil Mill.—The Heidelberg Oil Mill Co. is organizing to erect the mill lately noted.

Meridian—Knitting Mill.—The Co-operative Knitting Mills, recently noted, has purchased fifty machines and will install same at once.

Woodville—Cotton Gin.—Sessions Brothers will build a new cotton gin.*

MISSOURI.

St. Louis—Car-fender Company.—Incorporated: The National Automatic Car Fender Co., capital stock \$125,000, by Henry Moser, C. H. Hofmeister, D. P. Shields and Jesse A. Graham.

St. Louis—Building.—The Holland Building Co., capital stock \$200,000, has been incorporated by Thos. as Bayley, L. C. Spooner and G. H. Ten Broeck.

St. Louis—Mercantile.—The Jno. G. Kaiser Grocery Co., capital stock \$65,000, has been incorporated by John G. Kaiser, Henry Kaiser and George E. Kaiser.

St. Louis—Publishing.—The Rolling Pin Publishing Co., capital stock \$25,000, has been incorporated by John H. Carter, E. W. Hardlar and W. N. Carter.

NORTH CAROLINA.

Asheboro—Gold Mine.—G. G. Hendricks will develop a gold mine.

Asheville—Mercantile.—K. P. Jones and Gus Bradt have formed the Asheville Mercantile Co.

Charlotte—Fire-works Factory.—Charles Davidson has established a fire-works factory.

Concord—Gold Mill.—W. N. Widenhouse will erect a gold stamp mill.

King's Mountain—Cotton Mill.—W. O. Ware & Son contemplate putting in looms.

Rocky Mount—Gold Mill.—The Arzo Stamp Mill is being enlarged and improved to have a daily capacity of 120 tons of ore.

Wilson—Sewerage System.—The city proposes constructing a sewerage system, and J. L. Ludlow, of Winston, has been engaged as constructing engineer; Jno. F. Burton, mayor.*

SOUTH CAROLINA.

Aiken Junction (postoffice, Aiken)—Cotton Mill.—Chas. A. Davis is trying to organize a company to build a 20,000-spindle mill.

Barnwell—Mercantile.—Chartered: The South Carolina Midland Co., by J. W. Crow, J. L. Villalunga and Mike Brown, with a capital stock of \$150,000.

Charleston—Mercantile.—A charter has been granted to the Hirsch Israel Co., with capital stock \$75,000. The incorporators are Isaac W. Hirsch, Samuel, Isadore, Lewis and Arthur Israel.

Charleston—Advertising.—Chartered: The Mutual Advertising Co., by J. Hermie Ostendorf, J. L. David and others, with capital stock of \$1000.

Charleston—Telephone Company.—Chartered: The Carolina Mutual Telephone & Telegraph Co., with capital stock of \$30,000. E. M. Bailey is president; Moultrie Mordecai, vice-president, and R. B. Leiby, secretary and treasurer.

Columbia—Land, etc.—Charter issued to the South Carolina Midland Co. The officers are: President, Mike Brown; vice-president, J. L. Villalunga; secretary and treasurer, J. M. Easterling. The company proposes to induce settlers to remove to South Carolina, and to sell the company's property. The paid-up capital is \$30,000.

Cowpens—Cotton Mill.—S. B. Wilkins is trying to organize a \$150,000 cotton-mill company.

Easley—Mining.—The Beverly Mining Co. has been incorporated with capital stock of \$10,000 by J. B. Beverly, of Virginia, and A. G. Furman, of Greenville.

Gaffney—Oil Mill.—D. R. Bird, of Paeolet, S. C., has organized a \$12,000 company to erect a cottonseed-oil mill in Gaffney.

Greenville—Knitting Company.—Chartered: The Carolina Knitting Co., with capital stock of \$800, and the purpose is to sell a quilting patent. The incorporators are J. P. Carlisle and B. A. Morgan.

Greenville—Mercantile.—The Good Company, to operate a general merchandise store, capital stock \$3000, has been incorporated by W. G. Good and N. J. Good.

Spartanburg—Cotton Mill.—L. P. Walker is continuing his efforts to organize the cotton mill noted last week. It is proposed to put in 10,000 spindles and the necessary complement of looms.

Whitney—Cotton Mill.—The lately noted enlargement by the Whitney Manufacturing Co. is to be in addition equipped with 10,000 spindles.

TENNESSEE.

Chattanooga—Iron Mines.—Frank G. Costello will soon open new iron mines on the Chattanooga Southern Railway.

Greenville—Ice Plant.—The Greenville Creamery Co. will put in a three to five-ton ice plant.*

Jackson—Electric-light Plant.—The city council has contracted with the Jackson & Suburban Street Railway Co. for an electric-light plant.

Jellico—Iron Mines.—J. P. McDonald, of Knoxville, will develop iron mines near Jellico.

Knoxville—Telephone System.—The People's Telephone Co. will construct a line to Chattanooga, Sevierville and Maryville.

TEXAS.

Austin—Shoe Factory.—Martin McGinnies, of Missouri, is endeavoring to locate a shoe factory to employ from 150 to 400 hands, and is making a proposition through the Business Men's Club.

Buckner—Cotton Gin.—W. H. Reynolds will erect a cotton gin.*

Dallas—Coal Mining.—The Equitable Coal Co., capital stock \$30,000, has been incorporated by C. C. Slaughter, C. J. Eddy and G. C. Wright, of Dallas, for buying, selling, mining and shipping of coal, lignite and minerals.

Dallas—Furniture Company.—The Dallas Furniture Co., capital stock \$5000, has been incorporated by W. D. Simpson, Jr., and B. S. Hagedorn, of Dallas county, and Thos. B. Moses, of Limestone county.

Dallas—Steam Laundry, etc.—C. A. Forster and others have incorporated the Oriental Hotel Association, with a capital stock of \$150,000, to maintain steam laundry, hotel, etc.

Fort Worth—Oil Mill.—A large cottonseed-oil mill will be built in the near future.

Fort Worth—Cold-storage Plant.—The Southern Cold Storage & Produce Co., Wm. M. McVeigh, president, has let contract at \$13,000 for a two-story building, 100 feet square, to be equipped as a cold-storage plant. The company's capital is \$50,000.

Galveston—Cycles.—W. R. Folis and others have incorporated the Galveston Cycle Co., with a capital stock of \$25,000, to deal in cycles, etc.

Gilmer—Lumber Mills.—A. L. Clark, S. Wilkins and M. E. Sullenberger have incorporated the Commercial Lumber Co., with a capital stock of \$100,000, for manufacturing lumber, etc.

Smithville—Electric-light and Water Works.—The Smithville Town Co. will construct water works and erect an electric-light plant. Plans and bids are wanted.*

VIRGINIA.

Alexandria—Bicycle Works.—M. A. Tappan, of Washington, D. C., will establish a

bicycle factory, to employ fifty hands at the start.

Troutville—Washing Plant.—The Roanoke Land & Manganese Co. will put in a plant for washing 200 tons of iron ore daily.

Wytheville—Grist Mill.—John Moyers has erected a grist mill.

WEST VIRGINIA.

Moundsville—Cigar Factory.—Henry Seaton & Son, of Wheeling, will establish in Moundsville a factory for manufacturing 100,000 cigars daily; building has been secured, contract let for alterations and machinery purchased.

Wheeling—Gas and Oil Wells.—Chartered: The Smith Oil & Gas Co., with a capital of \$200,000, by L. M. Stephens, of New Martinsville; F. E. McCoy, W. R. Wells, W. R. Stevenson and Louis Feinler, of Wheeling.

Wheeling—Glass Works.—Percy Beaumont, J. F. Higgins, Fergus Whally and others have incorporated the Beaumont Glass Co., with a capital stock of \$15,000, to manufacture, decorate and etch glass.

BURNED.

Arthur City, Texas.—The Druerhe Hardware Co.'s mill; main office, St. Louis, Mo.

Helena, Ark.—Frank Forde's grist mill.

Owensboro, Ky.—The Elliott Tobacco Stemmy; loss \$18,000.

Nashville, Tenn.—W. W. Fitzpatrick's chair factory; loss \$75,000.

Red Banks, Miss.—W. S. Berkley's cotton gin.

Walkersville, Md.—Atler Bros.' creamery; loss \$25,000.

BUILDING NOTES

Augusta, Ga.—Church.—Plans have been prepared for a building for the First Baptist Church, to cost \$25,000.

Bella, Texas.—School.—The city intends to erect a \$7000 school building. Address the mayor.

Eureka Springs, Ark.—School.—Denis & Lance, of 317 W. 21st street, New York, are preparing plans for the International Teachers' Home building, to be five stories high, 25x150 feet.

Hartwell, Ga.—Church.—The Baptist Church members will erect a new church building.

Huntersville, Va.—Association Hall.—The I. O. O. F. will build a three-story hall to cost \$2000.

Jacksonville, Fla.—Armory.—Plans and specifications are wanted for public armory building, to cost not more than \$25,000. Address W. F. Coachman.

La Grange, Ga.—College.—Bruce & Morgan, of Atlanta, are preparing plans for new buildings for the Southern Female College.

Little Rock, Ark.—Church.—The First M. E. Church will erect a new structure, to cost about \$30,000. Address the pastor.

Louisville, Ky.—Office Building.—The Equitable Life Assurance Society, of New York city, will erect a six-story office building in Louisville; plans and specifications not prepared yet.

Mobile, Ala.—Institute.—Plans and specifications are being prepared for the McGill Institute; building to be three stories high, 75x140 feet. Felix McGill can be addressed.

Washington, D. C.—University.—Van Brunt & Howe, of Boston and Kansas City, will prepare plans for the first building for the Methodist University.

RAILROAD CONSTRUCTION.

Steam Railways.

Americus, Ga.—The Georgia & Alabama Railway Co. has surveyed two routes between Lyons and Savannah for its proposed extension.

Anniston, Ala.—The report has been received that the present owners of the Tennessee, Ashville & Coosa road are preparing to extend it from Ashville to Anniston.

Charleston, S. C.—The South Carolina & Augusta Company has been organized with August Belmont, chairman of the Louisville & Nashville board of directors, as president. If built it will be a branch of the Louisville & Nashville system.

Charleston, W. Va.—Vandergrift & Jacobs, of 1404 South Penn Square, Philadelphia, write the Manufacturers' Record that they have received a contract to build sixteen miles of the Charleston, Clendennin & Sutton road north from Clay Court House, W. Va.

Columbia, S. C.—It is stated that surveys have been completed for a road between Cheraw and Columbia, which will connect with the Seaboard Air Line at Hamlet, N. C. Contractor Hardin is reported to be making estimates for building the road. It would be eighty-five miles long.

Oakland, Md.—L. T. Yoder, of the Yoder Building, Pittsburg, Pa., writes the Manufacturers' Record that the Deer Park & Pittsburg connecting road may be built in 1896.

Southport, N. C.—H. H. Dougherty is authority for the statement that work will be commenced on the Carolina, Tennessee & Ohio road, between Wilmington and Southport, in 1896. Surveyors are completing their work on the route.

Spartanburg, S. C.—The Spartanburg & Rutherford Railway Co. has been formed to build the proposed line from Henrietta, on the Seaboard Air Line, to Spartanburg. The distance is twenty-four miles. The company is financially able to construct the road, and includes several bankers and other capitalists. Hon. A. B. Calvert, mayor of the city, is president. Surveys are being made and grading is to begin at once.

Staunton, Va.—The Atlantic, Staunton & Western road has secured a new charter. O. K. Lapham and J. W. Bodley are among those interested.

Tallahassee, Fla.—Vice-President J. M. Mayo, of the Tallahassee & Southeastern, writes the Manufacturers' Record that the line will be 101 miles long. It is expected to issue bonds and begin construction work in a few weeks. Mr. Mayo's address is Ocala.

Electric Railways.

Baltimore, Md.—Work is progressing on the Columbia & Maryland electric road at Ellicott City, also near Washington, while 4000 feet of the Baltimore section are completed. Henry T. Douglas is president.

Baltimore, Md.—The City Passenger Railway Co. is again considering the idea of changing its Blue Line cable road into a trolley line. The estimated cost is \$50,000. Walter S. Franklin is president.

Charleston, S. C.—Julian Fishburne and others have asked for a franchise to build an electric line in the city.

Charleston, W. Va.—Vandergrift & Jacobs, of 1404 South Penn Square, Philadelphia, write the Manufacturers' Record that they are building the trolley line, four and a half miles long, in Charleston, W. Va. Rolling stock is needed.*

Jackson, Tenn.—The Jackson Street Railway Co. is making arrangements to construct its trolley line.

Richmond, Va.—The Richmond Traction Co. has begun work on its electric line on Broad street. J. Skelton Williams is president.

Sparta, Tenn.—J. R. Tubb advises the Manufacturers' Record that the electric line to Cookeville will be twenty miles long if built. Water-power can be obtained to generate the electric current.

Staunton, Va.—Manager R. D. Apperson, of the Staunton Railway Co., states that about six miles of road will be converted into a trolley line. The company will do its own construction work. Equipment has not been purchased.

Washington, D. C.—The Columbia Railway Co. has asked permission to extend its lines in the city.

Machinery, Proposals and Supplies Wanted

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Barrel Materials.—The Wrightsville Hardware Co., Wrightsville, Pa., wants to correspond with manufacturers of barrel materials; wants to buy in carload lots.

Bicycle Machinery.—The Rogers Iron Works, Oakland, Maine, wants to buy machinery for the rapid production of bicycle hubs. Send catalogues, cuts, description and prices.

Boiler.—W. P. Jones, Marion, N. C., wants a forty horse-power return-flue boiler.

Boiler and Engine.—See "Cotton Gin."

Boilers and Engine.—The Hilton & Dodge Lumber Co., Darien, Ga., will want boilers and engine.

Brick Machinery.—Owen Tyler, Room 2, 338 W. Main street, Louisville, Ky., wants to correspond with manufacturers of cement-brick machinery.

Canning Machinery.—W. S. Oerting, Pensacola, Fla., wants correspondence with manufacturers of canning machinery.

Canning Outfit.—E. L. Gerard, Grenada, Miss., wants to buy small canning outfit, including cans and labels.

Cotton Gin.—Haley & Wilson, Lodi, Texas, want a cotton gin and press.

Cotton Gin.—W. H. Reynolds, Buckner, Texas, will buy cotton outfit.

Cotton Gin, etc.—Sessions Bros., Woodville, Miss., will buy a twenty or twenty-five horse-power boiler and engine, cotton gin, grist mill, cotton press, belting, pulleys, shafting, etc.

Cotton Gin, Cottonseed Huller and Delintier, etc.—Jno. W. Hill, Montpelier, Miss., wants a twenty-five horse-power engine and boiler, saw gin, feeder and condenser, cottonseed huller and seed-delinting machine.

Cotton-mill Machinery.—Jno. L. Harper, Americus, Ga., wants full particulars regarding cotton mill, cost of machinery, manufacturing, etc.

Cotton-mill Machinery.—Will F. Wynne, care of Birmingham Cotton Manufacturing Co., Birmingham, Ala., will want cotton-mill machinery.

Crusher.—L. H. Hyer, Washington Loan and Trust Building, Washington, D. C., is in the market for a good second-hand rock crusher of daily capacity of fifty to seventy-five yards, with steam plant complete.

Drying Plant.—J. R. Harahan, Charleston, S. C., wants to correspond with makers of plants for drying tankage and similar material.

Dynamo.—"Electricity," P. O. Box 469, Winchester, Ky., wants a 300-light 110-volt dynamo.

Electric-light Plant.—The city of Alexandria, La., will want to buy a 50 kilowatt alternating dynamo, 100 horse-power Ident engine, eighty horse-power boiler and all necessary steam pipe, belting, feed pump, heaters, etc. Bids will soon be advertised. Address A. C. Jones, superintendent electric-light plant.

Electric-light Plant.—The Gainesville Electric Co., Box C, Gainesville, Fla., wants new or second-hand plant of forty 2000 candle-power arc and 1000 sixteen candle-power incandescent lights.

Electric Supplies.—Will F. Wynne, care of Birmingham Cotton Manufacturing Co., Birmingham, Ala., will want electric supplies.

Engine.—W. P. Jones, Marion, N. C., wants a twenty-five horse-power centre crank stationary engine with two driving wheels; prefer second-hand if in good condition.

Electric-light Plant.—The Smithville Town Co., Smithville, Texas, wants plans and bids on an electric-light plant.

Gasoline Engine.—"Electricity," P. O. Box 469, Winchester, Ky., wants a thirty horse-power gasoline engine.

Grist Mill.—See "Cotton Gin."

Heating Appliances.—F. H. Drake, Amite City, La., wants estimates on flues for stoves, to occupy small space and of small cost.

Ice Plant.—H. Reeves, Greenville, Tenn., wants estimates on a five-ton ice plant, exclusive of motive power.

Ice Plant.—The Greenville Creamery Co., Greenville, Tenn., will buy a three to five-ton ice plant.

Iron Planer.—The Southern Log Cart & Supply Co., Mobile, Ala., wants a large iron planer.

Key-seating Machine.—The Cameron & Barkley Co., Charleston, S. C., wants prices on a key-seating machine for use on shafting from two and eleven-sixteenths to four and one-half inches.

Knitting Machinery.—B. O. Puckett, Opelika, Ala., wants to correspond with manufacturers of knitting machinery.

Lumber Machinery.—C. N. Wilson, Maysville, Ga., wants prices and catalogues of planers.

Machine Tools, Belting, etc.—Will F. Wynne, care of Birmingham Cotton Manufacturing Co., Birmingham, Ala., will want lathes, gear cutters, roller covers, belting, packing, etc.

Pipe.—The water board of Baltimore, Md.,

will open sealed proposals January 6 for furnishing about 2000 tons of cast-iron pipe, one and a-half to twelve inches in diameter, cast-iron pipe fittings, etc., for year 1896. Address W. L. Kenly, chief engineer.

Pipe Sewers.—Sealed proposals will be received until January 30 for furnishing pipe and constructing sewers, five and a-half miles long, six to fifteen inches in diameter. Address Jno. R. Moore, town clerk, Wilson, N. C.

Planing mill Machinery.—W. A. Harris, White Post, Ky., wants a double surfacer and flooring machine with molding attachment and a resaw.

Pump.—H. Reeves, Greenville, Tenn., wants estimates on a pump of 10,000 gallons capacity hourly, with governor.

Pumping Station, etc.—Sealed proposals will be opened February 11 for erection of pumping station, including machinery, foundations, buildings, etc. Address Frank Markey, secretary, New Orleans, La.

Railway Equipment.—The H. & N. E. R. R., W. B. Winslow, secretary, 400 Richardson Block, Chattanooga, Tenn., may possibly be in the market within sixty days for several hundred coal cars.

Railway Equipment.—The Manchester Lumber Co., Manchester, N. C., wants to buy a second-hand Shay train engine for wood rails.

Railway Equipment (electric).—Vandergrift & Jacobs, 1404 South Penn Square, Philadelphia, Pa., may probably buy seven 16 foot enclosed motor cars with double equipment.

Roofing and Paints.—Shirley & Butler, Warren, Ariz., will want roofing for two sheds 30x80 feet, also paints.

Saw-mill Machinery.—The Hilton & Dodge Lumber Co., Darien, Ga., will want to buy circular saw mill complete.

Steel Casting.—D. C. Crider, Chick, Texas, wants to correspond with parties who have facilities for casting a steel spur frame in small lots.

Sewerage System.—Bids will be advertised for on January 30 to construct a sewerage system at Wilson, N. C.; Jno. F. Barton, mayor.

Toys.—H. H. Clausen, Augusta, Ga., wants to correspond with manufacturers of iron, tin, wooden and other kinds of toys.

Turpentine Axes.—Mr. D. Jones, of 252 Capital avenue, Atlanta, Ga., desires to purchase a supply of turpentine axes, hackers, etc., and would like to have quotations from dealers in same.

Water Works.—The city council of Waco, Texas, having ratified election for water works, bids will be wanted soon. Address the mayor.

Water Works.—The Smithville Town Co., Smithville, Texas, wants plans and bids on system of water supply.

Woodworking Machinery and Saws.—Thos. L. Day, Ridgeley, Md., wants a double surfacer, a resawing machine and a cut-off for cutting long boards into shooks.

TRADE NOTES.

Messrs. W. J. Dickey & Sons, of Baltimore, have ordered nine sets of wool cards and mules from the well-known M. A. Furber & Son Machine Co., of Philadelphia, Pa.

Mr. H. S. Chadwick, of Charlotte, N. C., is interested in the proposed Colleton Mill Co., at Walterboro, S. C., and is endeavoring to secure capital for same. A 10,000 spindle and 250-loom plant is proposed.

The Lodge & Days Machine Tool Co., of Cincinnati, Ohio, has just closed a large deal through its English agent with an extensive bicycle manufacturer of Coventry, England. The contract specifies the complete equipment of the plant, and will consist of several carloads of machine tools.

A new catalogue of Read's odorless refrigerators is issued by the Keyser Manufacturing Co., Chattanooga, Tenn. Many valuable features distinguish these refrigerators. Although a new article on the market, they are already introduced in twenty-two States. The system employed is a departure from old methods, and has evoked favorable comment from all quarters.

In connection with a recent item published in this column on "The Expansion of Export Trade," attention is called to another large shipment of railway material made last week by the New York Equipment Co. to the island of Jamaica, West Indies. The cargo (which included about 7000 tons of heavy bridge girders), being too large to be carried as a whole in the regular steamships running to the West

Indies, a special steamer was chartered to convey this product of American mills to a country practically owned and controlled by the English. This railway material and these bridge girders are to be used in the extension of the Jamaica Railway east to Port Antonio, now being built by Jas. P. McDonald & Co., contractors, 80 Broadway, New York.

The Mercantile Trade Lst Co., Station A, Pittsburg, Pa., has taken up the question of circular advertising. Large returns are claimed as possible from this class of advertising by mailing circulars, catalogues, etc., systematically. This company is constantly collecting and compiling accurate classified lists of those engaged in the various lines of business, making revisions frequently, so that the lists are always up to date.

The National Saw Co., manufacturers of high-grade saws of every description, is sending out from its general office at Newark, N. J., a very attractive and serviceable calendar, 8x11 inches, for the year 1896. Copies may be secured upon application. This company operates Wheeler, Madden & Clemson Manufacturing Co., Woodrough & McParlin, Richardson Bros. and Harvey W. Pease Co. The superior character of its product is introduced to all quarters of the globe.

Steady headway is reported by the New Orleans Roofing and Metal Works, New Orleans, La., in the introduction of its wares. This concern is turning out products that are winning much favorable comment. Its goods show a lively appreciation for artistic taste, combined with strength and durability. Recent orders included a large roofing contract for bottling works, all the sheet-metal work on the Pickwick Club's handsome new building, and considerable factory and residence work.

Starting out under the favoring conditions of an able and experienced management, the new Rogers Iron Works, at Oakland, Maine, promises to soon become a strong factor in the class of work it will handle. This concern was recently incorporated with a capital stock of \$300,000 to manufacture a number of new patents. This company will manufacture a complete line of general tools for machine-shop equipment, pulp-mill machinery, etc., and has special facilities for handling heavy and light foundry work of all kinds. Among the new specialties is frictionless "ball bearing" to be used on bicycles, carriages, shafting and for various other purposes, heavy contracts for which are now pending. There will be a separate department for this business at the works. Details regarding the products will be furnished on application.

The recent disaster in the engine-room of the Olympia Theatre, in New York, emphasizes the necessity of a safeguard against such accidents. Life and property are too precious to be left to the mercy of such risks and chances. We beg to inform our large circle of readers who are engineers and steam users that the Foster Engineering Co., of Newark, N. J., has perfected and put on the market an automatic safety stop valve which was designed expressly to meet just such emergencies. In the event of bursting of the steam pipes or other serious damage to the piping system, this new valve instantly and automatically shuts off steam from the boiler, thus preventing its escape, with all attending consequences. This valve is applicable to large steam plants, factories, steamships, steam-heated buildings, etc., and insurance underwriters, as well as contractors and proprietors, should look into its merits in the interest of safety to life and property.

Prominence to the terse saying of Lincoln, that "when an American bought steel from an English manufacturer, America had the steel and England had the money; but when he bought steel from an American manufacturer, America had both the steel and the money," is given in trade literature issued by the D. M. Steward Manufacturing Co., Chattanooga, Tenn. This concern makes, among other things, slate pencils and lava tips for gas burners. It is a Southern industry, and the way it is pushing its product in all markets is the proof of what is practicable in this section. The Steward tip is considered in authoritative circles to be superior to anything of the sort made in Germany or France, and it is said to be rapidly displacing foreign makes. Last year the company turned out 30,000 gross of tips, and the way orders are rolling in seems to substantiate the strong claims made for its product. The company is duplicating the machinery of this department. Similar flattering success is met by its slate pencils, electric insulators, rolling mill and metal workers' crayons, dustless school crayons, tailors' chalk, etc.

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Winter Excursion Tickets on the Pennsylvania Railroad

The Pennsylvania Railroad Co. now has on sale at its principal ticket offices excursion tickets to all prominent winter resorts in Virginia, North and South Carolina, Georgia, Florida and Cuba. The tickets are sold at the usual low rates. The magnificent facilities of the Pennsylvania Railroad, with its many connections, make this a favorite line for winter travel. An illustrated book, descriptive of winter resorts, and giving routes of travel and rates for tickets, will be furnished free on application to ticket agents.

The *Southern States* magazine is read by thousands of farmers, fruit-growers, stock-raisers and business men in all the North, West and Northwest, who are looking to the South as a future home and are trying to inform themselves as to the relative advantages of different parts of the South. If you have farm, garden or orchard property for sale the *Southern States* will put you into communication with buyers. Send for sample copy and rates. Manufacturers' Record Publishing Co., Baltimore, Md.; Wm. H. Edmonds, editor and manager.

If you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send us a postal card giving the character of machinery needed.

ANNUAL REPORT.

OFFICE OF THE WESTERN MARYLAND RAILROAD CO.

BALTIMORE, December 23, 1895.

To the Mayor and City Council of Baltimore and the Stockholders of the Western Maryland Railroad Co.:
Gentlemen—The following statement of the operations of the road for the year ended September 30, 1895, is respectfully submitted:

Excluding the earnings upon the tracks of other roads in Baltimore, we have the following:

Earnings.	1895.	1894.	
Passenger.....	\$357,041 50	\$358,747 38	Dec., \$21,705 68
Freight and Express.....	831,498 82	773,065 90	Inc., 98,404 92
Milk and Marketing.....	35,342 42	37,237 27	Dec., 804 85
Mails.....	25,736 26	25,650 52	Inc., 885 74
Miscellaneous.....	49,243 36	51,155 27	Dec., 1,801 91
Total Gross Earnings.....	\$1,277,862 36	\$1,285,747 34	Inc., \$7,884 98
Expenses.	1895.	1894.	
Conducting Transportation.....	\$465,395 29	\$449,202 41	Inc., \$16,192 88
Maintenance of Way and Structures.....	151,618 67	148,058 68	Inc., 3,559 99
Maintenance of Equipment.....	119,859 80	107,927 72	Inc., 11,932 08
General Expenses.....	83,276 56	79,596 15	Inc., 3,680 41
Total Operating Expenses.....	\$820,150 32	\$784,784 96	Inc., \$35,365 36
Net earnings from Operation.....	\$457,712 24	\$441,062 38	Inc., \$16,649 86
Ratio of Expenses to Earnings.....	64.2 pr. ct.	65.2 pr. ct.	Dec., 1 pr. ct.
Of the net earnings, there was expended:			
For Construction.....			\$33,880 97
For Equipment.....			54,335 54
For Betterment.....			14,105 01
Total.....			\$102,420 52

While the operations of the Main Line show a net decrease of \$16,649.86 for the year, those of the Leased Lines show a net increase of \$39,375.51, making, for the System, an increase in net earnings of \$22,725.65.

By comparison of the Bills Payable as shown by Main Line and Baltimore and Harrisburg Balance Sheets of 1894 and 1895, it will be seen that the floating debt has been reduced \$108,703.72 during the year. This was effected partially by the application of net earnings and partially by an amount collected during the year from the Potomac Valley Railroad Co., which amount has been advanced from Main Line earnings to complete the construction of the Potomac Valley Railroad.

According to the provisions of State and United States laws recently enacted, the company was compelled during the year to make large expenditures in the application of steam heat to its passenger equipment and in supplying "grab-irons" upon all freight cars and the bringing of the "draw-heads" of all such cars to a uniform height above the rails, while a further expenditure of nearly \$60,000 will be necessary prior to January, 1898, in the supplying of automobile brakes and couplers to the freight equipment of the company. As long as action in such matters is arbitrarily regulated by legislation rather than by the necessities of traffic and with due regard to the financial ability of railroad companies, it will be difficult to predict with any degree of certainty the earning capacity of railroad property.

By the serious interference, amounting to almost total suspension, of the traffic of the road during the February blizzard, not only was the revenue materially reduced, but the raising of the snow blockade entailed an actual expenditure of \$8582.79, this service requiring three days' work of forty-three locomotives and 600 men.

The road being peculiarly subject to snow interference, it was decided, after this experience, to provide two additional snow plows of the Russell pattern, which have been received since the close of the fiscal year, it being believed that by having an effective plow at each of the three centres of operations—Union Bridge, Hagerstown and Hancock—it will be practicable, with a couple of heavy engines and a small gang of men to each, to keep traffic moving during the severest winter storms, and at trifling cost, compared with the methods commonly in use.

A new city passenger station, known as Walbrook, was opened for business during the year June 30, 1895. It is at the crossing of North avenue, one mile west of Fulton. Commensal station buildings were also erected at Smithsburg, Washington county, and at Glyndon, Baltimore county, Maryland. The first is of Hummelstown stone, with slate roof, and the latter of Baltimore county marble, with the roof.

The electric railroad competition upon the twenty miles of line next to Baltimore during the five months most favorable to such competition, May 1 to September 30, with the consequent reduction of rates, resulted in an increase of 9128 passengers hauled by this road upon this portion of its line, with a falling off of \$6973.34 in earnings from such business as compared with the corresponding months of 1894. As there was, however, a falling off of \$21,705.68 in the passenger earnings of the entire system, it is likely that a portion of this loss is attributable to the continued business depression more than to the electric railroad diversion. Had rates been maintained by this company, it is believed that a materially lighter business and a heavier falling off in revenue would have resulted. It is probable that with the novelty of the new system gone, less diversion will hereafter result.

The company's operations being conducted for the most part in developing sections of country, there seems to be no end to the demand for new sidings and other business facilities, nor a reasonable limit to the expenditures incident to meeting these wants; hence the impracticability of lessening construction and equipment expenditures at this time.

As the bridge across the Codorus Creek at York is about completed, also the commodious warehouse in a central locality on George street, while the new passenger station, which will be a very creditable improvement, is under contract for early completion, it is believed that by getting in position at an early day to offer improved facilities to that enterprising community, the share of business there controlled by the company will be materially increased.

The company is now paying interest on \$6,294,006.03 of main and branch line obligations, or, in other words, it is meeting all its interest obligations, except upon the third and fourth mortgages, which have always been paid by the city under its guarantees.

These two mortgages amount to \$1,875,000, and the rate of interest is 6 per cent. The third, for \$875,000, matures in 1900, and the fourth, for \$1,000,000, in 1902. It will, therefore, be practicable, by the city applying the proceeds of an equal amount of 3½ per cent. city stock at par to the retiring of these bonds, to reduce the amount of interest now being paid under its guarantees from \$112,500 to \$65,625, resulting in an annual saving of \$46,875. This reduction, with reasonable relief from the high trackage charges now paid by the company to other roads in this city, and with relief at an early day from paying interest on floating debt, will not only enable it, without any further increase in net earnings, to meet all its interest and rental obligations, including the amount now assumed by the city, but to continue to apply \$100,000 annually to the purchase of new equipment and the making of other additions and improvements necessary to a growing property.

Further information in regard to the operations of the road and the financial condition of the company may be obtained from the appendix to this report, the report of the treasurer and the income accounts and balance sheets of the general auditor.

By order of the directors.

J. M. HOOD, President and General Manager.

Train Service to Florida and the South, Season 1896.

The Pennsylvania Railroad Co. has arranged to establish for the season an unexcelled through service to Florida and the South.

First, the "New York and Florida Special" will be placed in service January 6, leaving Baltimore 9:20 P. M. daily except Sunday, composed exclusively of Pullman vestibule smoking, dining, observation, sleeping and drawing-room cars, and will be run through over the Atlantic Coast Line to Jacksonville and St. Augustine. No extra fare will be charged on this train over and above the usual Pullman berth charges. There are in addition via the Atlantic Coast Line two express trains, one leaving Baltimore 2:25 P. M. daily, with Pullman buffet sleeping car to Port Tampa (via West Coast Line), and one sleeping car to Jacksonville and a car to Thomasville, Ga. The other train leaves Baltimore 2:55 A. M., with a Pullman buffet sleep-

ing car to Savannah and Jacksonville.

A most attractive and complete service will also be offered over the Southern Railway and the Florida Central & Peninsula Railroad, and on January 6 the "Florida Short Line, Limited," will be placed in service, leaving Baltimore 8:37 P. M. daily, with equipment consisting of baggage car, coaches, dining and drawing-room sleeping cars between Jersey City and Augusta, St. Augustine and Tampa. In addition thereto, the connection of the "United States Fast Mail," leaving Baltimore 9:42 A. M. daily, with Pullman sleeping car to Jacksonville. Excursion tickets now on sale at the company's principal ticket offices to Thomasville and all principal points in Florida.

If you want to reach the possible land buyers and investors in the North and West who are thinking of locating in the South, advertise in the *Southern States* magazine, published by the Manufacturers' Record Publishing Co., Baltimore, Md.

J. WM. MIDDENDORF.

Members Baltimore Stock Exchange.

WM. B. OLIVER.

**MIDDENDORF, OLIVER & CO.
BANKERS AND BROKERS,**No. 213 E. German Street, [KEYSER BUILDING.] Baltimore, Md.
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.**CLAPP & COMPANY, BANKERS AND BROKERS,**

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STOCKS, COTTON, GRAIN.Bank Stocks and Municipal Bonds Bought and Sold. Receive Deposits. Allow Interest.
PRIVATE TELEGRAPH WIRES. LONG DISTANCE TELEPHONE.**PERCY A. PICKRELL,**38 Wall Street,
NEW YORK.**INVESTMENT BANKER,**

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High-Grade Securities,
Enterprises of Merit Financed.

CORRESPONDENCE INVITED.

**SURETY BONDS OF EVERY KIND.
American Banking & Trust Co.**

OF BALTIMORE CITY.

Equitable Building, Baltimore.

Capital, fully paid, - \$500,000
Stockholders' Liability, - 500,000JAMES BOND, President.
JOHN HUBNER, Vice-Presidents.
JOSHUA HORNER, Secretary-Treas.
JOHN T. STONE, Counsel.
JOHN K. COWEN,

Gives security for Executors, Administrators, Trustees, Receivers, officers of Banks, Corporations, Lodges and Societies, Contractors, Clerks, Messengers, Conductors, Motormen, and all other employees, &c.

GUARANTEES THE FULFILLMENT OF CONTRACTS.

Maryland Trust Co.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

**A LEGAL DEPOSITORY FOR COURT
AND TRUST FUNDS.**

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

J. WILLCOX BROWN, PRESIDENT.

LLOYD L. JACKSON, VICE-PRES.

J. BERNARD SCOTT, Secretary and Treasurer.

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LIFE INSURANCE COMPANY**

of Cincinnati, Ohio.

Assets over \$13,000,000.

"One of the most pushing, thriving life companies in the land."—Ins. Age, N. Y. City.
Highest interest rate. Lowest death rate.

Safest investments.

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JOHN A. HERNDON, Jr., State Agent,
Manufacturers' Record Bldg Baltimore, Md.**JOHN L. WILLIAMS & SONS,
BANKERS,**

Dealers in RICHMOND, VA.

Southern Investment Securities,
MUNICIPAL BONDS A SPECIALTY.
Correspondence Invited.**ANDREW MAYER,**

10 Wall Street, New York.

Investments. Street Railways,
Loans on Collateral, Electric Light Plants,
Commercial Paper, Gas and Water Works,
Capital Procured, Constructed and Reorganized.

Correspondence Solicited.

Central of Georgia.

5S AND INCOMES

Southern Railway

UNDERLYING BONDS,

and all inactive steam railway securities,
DEALT IN, BUT
NO NEW ENTERPRISES PROMOTED.

F. J. LISMAN,

10 Wall Street, NEW YORK.
Member New York Stock Exchange.**LOOK HERE!**in a big dividend paying company.
Must come quick.

C. M., care Manufacturers' Record.

**Gold
Bonds**

FOR SALE.

The Gainesville & Gulf Railroad Co., have in operation twenty-seven miles of road, standard gauge, 60-lb. steel rails and sixteen side tracks, nine depots, engines, cars, etc., also land grant of 14,000 acres per mile.

We have traffic arrangements with F. C. & P. R. R. Co., under which the road was operated the past year at an expense of less than 50 per cent. of its earnings.

We want to extend the Road to Tampa Bay, seventy-three miles further south, and sell 30-year, first mortgage 6 per cent. Gold Bonds at rate of \$5000 per mile on road now operated, and on each ten miles of extension as completed.

This extension is located through the best Vegetable, Farming, Timber and Phosphate Lands in the State. It will reach fifty phosphate mines with a present output capacity of over 300,000 tons per annum, and placing other valuable deposits of phosphate on transportation.

JAS. M. GRAHAM,
Vice-President,
Gainesville, Fla.**PROPOSALS.**

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., December 23, 1895.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 30th day of January, 1896, and opened immediately thereafter, for all the labor and materials required for the interior finish, iron stairs, ceiling lights, plumbing, approaches, etc., for the U. S. Post-office, etc., building at Worcester, Mass., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Worcester, Mass. Each bid must be accompanied by a certified check for one hundred and twenty five dollars. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All proposals received after the time stated for opening will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Interior Finish, etc., for the U. S. Postoffice, etc., building at Worcester, Mass.," and addressed to WM. MARTIN AIKEN, Supervising Architect.

**PROPOSALS for Constructing
SEWERS and for
furnishing SEWER PIPES
at Wilson, N. C.**

Sealed proposals will be received by the Board of Commissioners of Wilson, N. C., until 3 P. M. January 30th, 1896, for constructing pipe sewers, and for furnishing pipe for same (separate bids.) Extent of proposed work is five and a-half miles of pipe, sewers from 6 to 15 inches diameter. Plans and specifications will be on file at the office of the Board, and copies of specifications, forms, etc., may be obtained after January 10th, 1896.

JOHN F. BRUTON, Mayor.

J. L. LUDLOW, Engineer,
WINSTON, N. C.**BALTIMORE****CITY DIRECTORY**

FOR 1896.

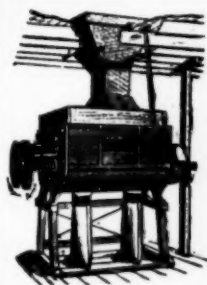
The canvass for the above work has been completed, and it will be put to press the 21ST DECEMBER.

Parties who have changed their residence or business locations since the 15TH of SEPTEMBER, or contemplate changing the style of their firm, to INSURE A CORRECT INSERTION IN SAME, will please address

BENJ. R. SHERIFF,

Manager for R. L. POLK & CO.

112 North Charles Street, BALTIMORE, MD.

**DRY MIXER,**
The BROUGHTON
FOR
Hard Plaster, Cement, Paint, &c.
W. D. DUNNING,
96 W. Water St
SYRACUSE, N. Y.

ESTABLISHED 1844.

S. Munn, Son & Co.**COTTON**

GRAIN AND PROVISION

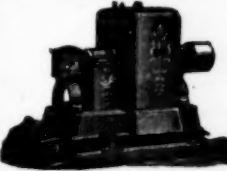
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NEW YORK CITY. Send for circular. Solicit orders for future delivery.

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**THE TRIUMPH.**

DYNAMOS and MOTORS Carried in Stock.

No Better Machine Made.

The Triumph Electric Co. Cincinnati, O.

H. W. JOHNS'

ASBESTOS

SECTIONAL PIPE
COVERINGS.

NON-CONDUCTING COVERINGS FOR STEAM AND HOT WATER PIPES, BOILERS ETC.

READILY ATTACHED OR REMOVED BY ANY ONE. ASBESTOS BOILER COVERINGS

WE ARE PREPARED TO TAKE CONTRACTS FOR APPLYING STEAM PIPE AND BOILER COVERINGS IN ANY PART OF THE UNITED STATES.

H. W. JOHNS' ASBESTOS MILLBOARD, SHEATHINGS, BUILDING FELTS, FIRE PROOF PAINTS, LIQUID PAINTS, ASBESTOS ROOFING, ETC.

H. W. JOHNS MANUFACTURING COMPANY,

87 MAIDEN LANE, N. Y. JERSEY CITY, CHICAGO, PHILADELPHIA, BOSTON, LONDON

FOR SALE.In the city of
CHARLESTON, S. C.

An ideal city for a winter home, full of historic interest, and a climate mild and soft in winter, but not hot enough to be enervating.

A Beautiful

Old Colonial Residence

And a Handsome

Large Modern Residence.

And Several Choice BUILDING LOTS.

The City of Charleston water supply is obtained from artesian wells, and it has recently been proven to be a valuable dyspeptic cure when used as drinking water, and a rheumatic cure when bathed in hot. Both of these residences are supplied with this water.

Also Timber and Farming Lands and Rice Plantations in South Carolina.

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Contractors and Builders can save money by letting us estimate on their bids.

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MORGANTON, N. C.**THE BRADSTREET
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WAS ESTABLISHED IN 1849.

Is the oldest and financially the strongest organization of its kind, working in one interest and under one management, with more capital invested in the business, and expends more money every year for the collection and dissemination of its information than any similar institution in the world. Its reports are considered in the light of a guide by both investors and those contemplating the granting of credit. In addition to a large corps of skilled employees, more than one hundred thousand correspondents contribute the result of their investigation and opinions. Subscriptions are annual, and may commence at any time the subscriber elects. Details as to prices and terms will be furnished upon application.

CHARLES F. CLARK, President.

Baltimore Office, - Equitable Building,
R. KERRHAW, Supt.**THE BOOMER & BOSCHERT
KNUCKLE JOINT****PRESS**FOR Baling
Cloth, Paper, Yarn, &c.

Or for any other purpose requiring great pressure.

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R. OERLEIN.

330 Carondelet Street.

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Mill Agent and Broker,

IN COTTONSEED PRODUCTS.

Choice and prime Cake and Meal for export; off grades meal. Cottonseed-Hull ashes for fertilizers. Correspondence solicited.

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OPPORTUNITIES FOR INVESTORS.

\$30,000 WANTED

For TEN years

At 5 per cent. per annum.
Approved Security. First
Mortgage on real estate in
the City of Tampa, Fla.

For details write to

SOLOMON B. TURMAN,
TAMPA, FLA.

Kaolin and Corundum

FOR SALE.

Large deposit of superior Kaolin near railroad,
and the most extensive property of massive
Corundum ever found. For particulars write

F. R. HEWITT, Hewitt, Swain County, N. C.

TIMBERED LANDS.

We have for sale choice tracts of Long Leaf
Yellow Pine in South Georgia, and Hardwood in
North Georgia at tempting prices. We furnish
copies of original grants, abstracts of titles and
maps, and look after timbered lands for non-
resident owners.

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701, 702 and 703 Temple Court Building,
ATLANTA, GA.

FOR SALE.

Stock Yellow Pine Lumber,

Teams, good will, Planing Mill, Scroll and Turn-
ing Machinery attached, and on good yard loca-
tion in rapidly improving Southern city. Imme-
diate and surrounding population about 100,000.
Healthy climate. Address **YELLOW PINE,**
care Manufacturers' Record.

Saw Mill

FOR SALE

TO CLOSE AN ESTATE.

Almost new, Engine, Boiler, Band Mill, two
Gangs, Lath and Picket Mill, Trucks, etc.
Also 6000 feet T Rails.
Sold at a bargain on very easy terms.
Address

WOOLVERTON & TINSMAN,
WILLIAMSPORT, PA

FOR SALE OR RENT.

Desirable Manufacturing Property

At intersection of Washington Ave. and Gwynn's
Falls, Baltimore, Md. Substantial factory build-
ing 50x60; five stories; water power, 120 horse
power; three Union boilers 50 horse power each.
Can be bought on terms to suit. For price and
further particulars apply to WM. MARTIN &
CO., 12 St. Paul Street, Baltimore, Md.

I OFFER FOR SALE MY TANNERY,
SHOE AND HARNESS MANUFACTUR-
ING BUSINESS, all complete. It will pay
the best dividend on amount invested of
any business I know of. All I ask is an in-
vestigation to convince anyone there is from
40 to 50 per cent. profit in it.

G. C. BRADLEY, Troy, S. C.

FOR SALE FEMALE COLLEGE

in THOMASVILLE, N. C., on Southern Railway,
Piedmont section. Four-story brick house, fifty
rooms, metal roof, large grove, outbuildings,
orchard, grapes, etc.; 16½ acres. Climate noted
for health. Admirably suited for school, hotel or
sanitarium. Terms liberal. Apply to the owner,
H. W. REINHART, Morehead City, N. C.

For Rent or Lease.

One Brick Machine and
Blacksmith Shop and
Boiler House with 125 H. P. Boiler in good con-
dition, and
One Wooden Building 50x280 feet.

This property, which is well suited for manufac-
turing purposes, is located on the tracks of the
Atlantic & Danville Railway Co., just beyond the
limits of the City of Portsmouth, Va.

For further information apply to

SUPERINTENDENT,
Atlantic & Danville Railway Co., NORFOLK, VA.

A PARTY WHO CONTROLS THE LARGEST
UNDEVELOPED DEPOSIT OF BROWN
AND RED ORE IN THE SOUTH desires a
PARTNER who will furnish capital to develop
same. Large contracts for the ore, at remunera-
tive price, can be made with furnaces at Chat-
ta-nooga and Birmingham.
Address

GEO. H. WEBB,
CHATTANOOGA, TENN.

\$24,500 WANTED

for ten years at 6 per cent.; interest paya-
ble quarterly. \$6000 wanted now and
\$2000 a month. To improve Augusta,
Georgia, real estate that will pay 19 per
cent. Good security and reference given.
Address **GEORGE A. BAILIE, Trustee,**
Augusta, Ga.

Are You Looking for a Business or Good Location?

At Mossy Creek, Tenn.
PARTNER WANTED, with some means, to
increase business; a hustler preferred, or will sell
if desired, large factory, water power, buildings,
machinery, etc. Lumber section. Centre village.
Write for particulars. **MOSSY CREEK MANU-
FACTURING CO., Mossy Creek, Tenn.**

FOR SALE

NEAR ATLANTA, GA.

A fine water-power (about 1000 horse) dam, 600
feet long, 10 feet high. Wheat, corn and saw
mills, also cotton gin and wool carder, on the
property; 70 acres of land, good dwelling, etc.
Splendid place for cotton or other factory.

GEO. K. LOOPER, Attorney-at-law,
9½ Peachtree Street, ATLANTA, GA.

A Sportsman's Paradise

FOR
SALE

ST. VINCENT'S ISLAND

It Has No Duplicate.

A splendid natural game preserve of over 11,000
acres, abounding in deer, water fowl, fish and
oysters. Off the delightful Gulf Coast, one
hour's sail from Apalachicola, Fla. An incom-
parable possession for

A Wealthy Sportsman, or
As a Winter Quarters for a Sportsman's Club.
As a Winter Home.
As a General Winter and Summer Resort.
As a Cattle Range, or
As a Site for Canning Industries.

Unique in its advantages—from Wilmington to
New Orleans no similar available island or
section can be found. Those familiar with the South Atlantic and
Gulf Coasts know that every desirable island
there has been bought by some club or wealthy
gentleman. St. Vincent's is offered only because
its owner has other possessions which monopo-
lize his attention.

St. Vincent's is nine miles long, and its greatest
width is four miles. The few other islands of
the Gulf are long, narrow spits, without fresh
water or forest cover for game, and are far
away from good harbors and proximity to rail-
road towns. St. Vincent's has several hundred
acres of land locked bays, and a number of fresh
water ponds, connected by a stream which flows
into the bay. Three fourths of the island is
wooded; one-fourth is wet prairie, or savannahs,
which swarm with ducks, geese, snipe, curlew,
plover, etc., from October to April. The fresh
water creek and ponds are full of black bass,
bream and perch, which are taken all through
the winter. Oysters of finest quality, shrimp,
crabs and terrapin are abundant. In the adjacent
channels and in the coves are oyster beds and all
the salt water fish of the Gulf, including tarpon,
pompano, Spanish mackerel, sea bass, whiting,
snapper, etc.

The island has long been noted for the abun-
dant deer upon it, and it also contains a num-
ber of wild hogs, catamount and alligators.
Nearby lies St. Joseph's Peninsular and bay
scarcely accessible from any other direction than
St. Vincent's, where deer, bear, panther, turkeys,
geese, ducks, etc., are more plentiful than any-
where else in Florida. There is no cultivated
land on the island except a small garden and
orchard near the residence.

Having been utilized as a
CATTLE RANCH,
for which it is admirably adapted,

There are over 300 head of cattle now upon it.

The winter climate of St. Vincent's is a notable
feature. Here it is drier and more equable and
invigorating than on the Atlantic Coast; there is
hunting and fishing all winter, but it is not in
the winter mosquito belt. This entire island,
stock and all, can be bought for \$37,500, or a
little more than \$1 an acre.

For further information address

PHENIS, CRAM & KERR,
Mills Building, NEW YORK.

FOR SALE.

6000 ACRES COAL and TIMBER LANDS

located on Big Black Mountain, in Harlan county,
Kentucky, and about seven miles from Big Stone
Gap, Va. This region is, according to the State
reports the richest coal field in the State, and the
coal is very pure and of fine quality. The land
is covered by a heavy virgin forest of oak,
chestnut, whitewood, ash, etc.

N. G. KANT, Owner,

313 Columbia Street, BROOKLYN, N. Y.

FOR SALE OR LEASE.

New Building 50x200 Feet

with Boiler, Engine, Pump, Shafting, Pulleys,
1500 feet Steam Pipe for heating, etc. Well
suited for bicycle, hosiery, underwear, shoes,
bed springs, suspenders, umbrellas or any
other light manufacturing.

Five lines of railways, labor cheap, abundant
and intelligent. Low rates of freight. Suffolk
has schools, churches and city conveniences com-
bined with delightful climate, good water and
healthy surroundings. To the right party this is
an exceptional opportunity.

Address,

JOHN A. BROWNE, Agent,
East Suffolk Land Co., SUFFOLK, VA.

COAL

1000 ac. son railroad and waters
Monongahela River, near Clarks-
burg, W. Va., consisting of Pitts-
burg vein 9 feet thick. Cannot
be excelled for coke or gas. Location perfect.
Can be bought very low, as owners are "hard up."

TIMBER

20,000 acres in the heart of
the timber region of West
Virginia, that will cut 40,000
feet to the acre. Railroad
facilities. Price very low.

OIL

Territory in Harrison, Doddridge,
Gilmer and Lewis counties, W.
Va., ready for development.
We have several thousand acres of coal, timber
and farm lands in addition to the above in West
Virginia, Kentucky, Tennessee and Virginia.
Full particulars on application. Address

The Southern Real Estate Exchange.

CLARKSBURG, W. VA.

ATTENTION

Market Gardeners, Truck Farmers,
Fruit Growers and Stockmen

500,000 ACRES OF LAND FOR SALE.

In Tracts to suit purchasers, from 40 acres
upwards. Situated on the line of the

MOBILE & OHIO RAILROAD

In the States of
Alabama and Mississippi.

Unexcelled for the Production of Early
Vegetables and Fruit.

Mild Climate, Pure Water, Absolute
Healthfulness and Easy Access to
the Markets of the World.

Low rates of Freight, quick transit, ventilated
and refrigerator cars, and all modern facilities
for handling the business. Write for Full In-
formation, Maps, etc., to

HENRY FONDE,
President of Alabama Land & Development Co.
MOBILE, ALA.

ARE YOU LOOKING

FOR A CHANGE IN LOCATION?

If you are not satisfied
with your present site, or you are not doing
quite as well as you would like to, why not con-
sider the advantages of a location on the Illinois
Central R. R. or the Yazoo & Mississippi Valley
R. R.? These roads run through South Dakota,
Minnesota, Iowa, Wisconsin, Illinois, Indiana,
Kentucky, Tennessee, Mississippi and
LOUISIANA, and possess

Fine Sites for New Mills,
Best of Freight Facilities,
close proximity to

Coal Fields and Distributing Centers,
and
Intelligent Help of All Kinds,
Many Kinds of Raw Material.

For full information write the undersigned for
a copy of the pamphlet entitled

**100 Cities and Towns
Wanting Industries.**

This will give you the population, city and
county debt, death rate, assessed valuation of
property, tax rate, annual shipment of raw ma-
terials, industries desired, etc.

To sound industries, which will ear investigation,
substantial inducements will be given by
many of the places on the lines of the Illinois
Central R. R., which is the only road under one
management running through from the North-
western States to the Gulf of Mexico. **GEO. C.
POWER, Industrial Commissioner I. C. R. R.**
Co., 506 Central Station, Chicago.

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should be done PROMPTLY,
ENERGETICALLY and SYSTEMATI-
CALLY to obtain the best results. We
furnish names and addresses, carefully
classified by trades, covering all lines of
business. Write for particulars.

MERCANTILE TRADE LIST CO.

Station A., PITTSBURG, PA.

SITUATIONS WANTED.

Advertisements under this head are inserted
free of charge for readers of the MANUFACTURERS'
RECORD. Advertisements must not exceed five
lines—about thirty words—and four insertions
will be given without charge.

WANTED—A practical man to operate barrel
machinery or to take charge of factory.
Address **BARREL,** care Mfrs. Record. j24

WANTED—A thorough practical erecting
Engineer and Machinery Salesman, who
speaks Spanish thoroughly, wishes position
selling and erecting machinery in Mexico. Ad-
dress **A. L. CANFIELD,** San Pedro, Coahuila,
Mexico. j24

WANTED—A first-class MACHINIST to take
charge of our machine shop and as general
superintendent; must be strictly sober, honest,
energetic and thoroughly competent to direct
the construction of engines, saw mills and saw
mill machinery; want a man of business capacity
who can get work out of men and not afraid to
work himself; good wages for the right sort of
man, and a permanent job. Address **GENERAL
SUPERINTENDENT,** care Mfrs. Record. j17

SETTLED MAN, experienced in fruit, dairy
and general farming, and hardwood lumber
business, bookkeeper and mechanic, desires
employment in upland South. Address **F. A.
BROWN,** Hickory, Md. j17

WANTED—By reliable young man who has
had twelve years' experience as ENGI-
NEER, steam fitter, erecting shafting, etc.,
similar position with Southern manufacturer;
good references. Address **F. S. WOODWORTH,**
Island Brook Ave., Bridgeport, Conn. j17

WANTED—A position farther South as local
building SUPERINTENDENT, mechanical
or architectural draftsman, carpenter and
joiner foreman, or foreman pattern maker; twenty
years' experience. Address Box 865, Kent, O. j17

WANTED—A position as SUPERINTEND-
ENT or foreman by a master mechanic
and draughtsman. Correspondence solicited.
Address **T. F. WARWICK,** 208 Washington
Avenue Macon, Ga. j17

WANTED—A position as CLERK and BOOK-
KEEPER by a young man; three years'
experience in general goods business. Can fur-
nish good reference. Am willing to work for
reasonable salary. **W. BOSHEARS,** Pioneer,
Tenn. j10

WANTED—THE AGENCY of an established
manufacturing company needing a repre-
sentation in Boston and vicinity. Address **W. R.,**
care John L. Bremer & Co., in liq., Boston. j10

POSITION WANTED—FOREMAN or Super-
intendent of brickwork; Costa Rica or
South Africa, or any new field; practical in all its
branches; best of references; just completed
Government Building in Alexandria. Address
J. R. WOOD Alexandria, La. j10

A YOUNG MAN with six years' experience in
the lubricating and refined oil trade is open
for engagement. Address **SANDY,** care J. F.
Earp, Roanoke, Va. j13

A TRAVELING SALESMAN of fourteen
years' experience desires to locate January
1st with a reliable firm to represent same in New
York and vicinity. Large acquaintance among
jobbers, retailers in the hardware line, also mills.
Can furnish the best of references. Address
ADVERTISEMENT, 47 Clinton Avenue, Jersey
City, N. J. j13

WANTED—Position as TRAVELING SALE-
SMAN; thoroughly posted in belting, hose,
packings and general mill supplies. Address
A 372, care Manufacturers' Record. j13

YOUNG MAN, practical, experienced well
educated and not afraid of hard work,
desires office position in the South; competent
stenographer, typewriter and bookkeeper; capa-
ble of discharging the duties of assistant secre-
tary or of taking entire charge of correspondence
without dictation; at present employed; can
furnish reliable references. Address **PRACTI-
CAL,** P. O. Box 66, Stanton, Va. j13

SALESMAN WANTED—On commission, to
handle as side line or otherwise, a line of
leather-cup valves, cylinder plunger valves for
pumps, etc. Address **GEORGE OBERNE &
CO.,** 383 401 North Halsted Street, Chicago. j13

CONTRACTORS—Wanted by a practical man
with several years' experience in public
works electric railroads, sewerage, street paving,
conduits, etc., a position as SUPERINTEND-
ENT or assistant. Can furnish first-class refer-
ences. Address **D. A. FENTON,** 221 West
Preston Street, Baltimore. j13

POSITION wanted as **COTTON CARDER;**
large experience in Mt. Vernon and Laurel
Mills, Maryland; acquainted with all machinery;
location no object. Address **JAMES CHALK,**
Wethersville, Md. j13

CHAS. GOLDSBOROUGH, Civil Engineer,
twenty-five years' experience in railroad
surveys and construction, is open to an engage-
ment. Address 505 Cathedral St., Baltimore, Md. j13

ATLANTA EXPOSITION SUPPLEMENT.

A GENERAL SUMMING UP.

The Exposition—Points for Commendation and Some for Criticism.

[Special Cor. Manufacturers' Record.]

Atlanta, Ga., January 1.

While the "Cotton States and International Exposition" is now a thing of the past, its name and the results accomplished will live and be felt in the South for many years. The last two weeks have been marked by large attendance, the greater number being from other towns, brought in by the unprecedentedly low rates given by the roads since December 19. Not only has the attendance been good, but the Christmas holidays influenced many to open their purses, and the concessionaries have been benefited correspondingly. At the commencement of the exposition the majority of those who attended were from towns or cities, or the wealthier people from the country. Now the majority are plain every-day country folks, who are seeing everything, laying in a stock of knowledge which broadens their minds and quickens their appreciation of the power of industry. The good that the exposition is doing in this way is incalculable. Its purpose has not been to make a display merely for the favored few, but to help educate the masses, the people who, living in the country, have not the advantages of contact with those engaged in industries and who know so little about the uses which may be made of the many things around them. The "resources" they may call them, but it needs an exposition like this to teach them the true meaning of that word.

It seems probable that the exposition will prove to have been financially successful. If there will be any loss it will be a small one, and when it is remembered what a heavy expense it has been under this must show how extensively it has been patronized. There is no question but that the railroads have done this. They have all given exceptionally low rates since the beginning, and on special occasions, particularly between December 19 and 31, have given rates which, in some cases, amounted for a round-trip to only one-half of the price of a single-trip ticket. To encourage travel they have advertised the exposition widely and organized excursions from along their lines. Everything that they could do they did, and had it not been so the exposition would have been an unquestioned failure.

The results to the South have been of the highest importance. The exposition has helped to educate the Southern people to a fuller appreciation of two things: one, the great resources which lie dormant in the country, and the other, and even more important, the value of industry—not the industry which contemplates, but that which acts. There is too great a willingness in the South for someone else to come and do something, and not enough of an effort among the people to do it for themselves. They want a company organized, with many thousand dollars capital, and will wait until they can get it, losing sight of the very patent fact that a little money gathered among themselves, and a great deal of the energy which they need, would accomplish as much and with greater benefit to themselves as would the much-capitalized company. Sometimes the people will subscribe a number of thousands of dollars toward the capital of a large industry which they can get to locate in or

near their town. That is very good when the industry is a certain thing, but when it is not, and no one else is ready to provide further capital, why can they not start a company on a small scale and increase it with the profits? There is, of course, a limit in this, as no small works can operate as profitably as a very extensive one, in which the fixed charges are divided by a large output, still there are many places where the money collected to add to the capital of a big plant would have been sufficient to erect and profitably operate a smaller one. There is too much of this. One man won't work his ore property, because he is waiting for a company to start operations on a large scale. Another won't do anything with his timber, as he hopes to dispose of it in the same way, and the farmer who has a small tract won't cultivate it as carefully and economically as he could, because if he only had several times as much and stock and implements he could realize such a handsome profit on his crops, and so on through a long list. People don't do this because they don't know any better, for they do and have shown it in many cases, but there isn't enough of it. There are still too many farmers who haven't a moment's time in which to clean their implements and put them away for the winter, but who can get tangled in the meshes of a discussion and whittle an afternoon away at the country store. Too many merchants who hesitate longer about investing in some new line of goods than they would in wagering the possible loss in a game of cards. Too many landowners who are waiting for "something to turn up," in fact, entirely too many people who are waiting for somebody else to come and do things that they themselves lack the energy, or whatever it may be called, to undertake. The South has progressed nobly, it is true, but what has been done seems little compared with what may be done in the future.

The exposition has shown what has been done, and given its visitors a better idea of the resources of the South than was ever done before. It now remains for them to profit by it and act on the knowledge they have gained. In all the addresses and speeches and glowing newspaper articles on what the exposition was going to do for the South, the point has always been that it would attract people and capital from the North, who would come down and help in the work of development. The result of the greatest immediate importance, that of educating the people themselves, has been overlooked, but nevertheless it has been going on. The railroads have been important factors in this, as already said, for they have given remarkably low rates to enable the country people and those living in Southern towns and cities to visit the fair. This has been a direct benefit to the people, which will result in no less benefit to the roads.

On the other hand, a great deal of good has undoubtedly been accomplished in bringing Northern visitors down to see what were the opportunities offered in the South. But a small number of those who came had any adequate idea of the resources of this section, and none returned without being impressed both with the excellence of the exposition and more particularly with what the exhibits represented. Already the good effect of Chicago's visit is apparent in the efforts being made to reduce rates from that point

to the South, and equal benefit will result from elsewhere. The exposition was educational to the Northern and the Southern visitor, and to both it has done great good, infinitely more than can be estimated or than will show in any immediate results. Now is the time for the Southern farmer, merchant, banker and manufacturer to settle down to hard, progressive work, taking example by the courageous energy with which Atlanta has shown and pushing the results obtained there to further ripeness throughout the South.

Had the executive bodies of the various Southern States possessed the foresight which was shown by many of their citizens the displays at the exposition would have been far more creditable. As it was, the appropriations, where given, were entirely too small for anything like a thorough exhibit, and to make up for this, railroads and manufacturers were depended upon. Some of the States did not give anything, Alabama and Mississippi, for instance. Among those which did are Florida, but the only Florida exhibits worthy of the State are those made by the Plant system in its building, and by the land department of the Louisville & Nashville Railroad in the Agricultural Building. The former is described further on; the latter consists of various fruits grown in the State—cotton, wool and other products of a similar nature; some of the Florida naval stores, turpentine and resin, a number of plants and some salted fish, among them pompano, mullet and mackerel. There are also shown canned oysters, shrimp and turtle eggs, some oyster shells and the stuffed skin of a Florida tarpon. Another part of the exhibit consists of Florida nuts—black walnuts, pecans, peanuts, hickory-nuts and chestnuts, all of them unusually large. A number of Florida woods are displayed, some of them partly polished to show the grain, and Spanish moss and sugar-cane. A display of honey is made from Calhoun county and of orange wine from Wewatchitka, Fla.

South Carolina also has a large-sized exhibit in the Agricultural Building, showing many of the woods growing in the State and some of its minerals, among the latter being some gold ores from York county, phosphates and numerous fossil remains taken from the phosphate deposits. A large pyramid on one side of the exhibit contains boxes of fertilizer, surmounted by glass jars of the same products. Another case shows the bird-life of South Carolina. There is also a display of fire-brick and terra-cotta pipe from Richland county. From this same county there are a number of samples of gold ore, mica, corundum, yellow ochre and kaolin. A small display of the building stone of the State is made, including granite and marble of various kinds. The agricultural products are shown in an artistic booth, around which are placed jars containing corn, oats and other products. In this same booth are shown samples of cotton, both the lowland and upland, and the celebrated Sea Island, which is marketed in this State.

Arkansas, too, has an exhibit here, artistically arranged and beautiful to look at, but it is nearly all apples—apples of every color, size and variety. There are also some jars containing other fruits, and in another part of the exhibit some cotton, corn, wheat, oats, potatoes, onions, hay and pumpkins, and a few specimens of the woods of the State. In the Min-

eral and Forestry Building this State has some cases of minerals, representing its extensive mineral resources. Alabama failed to provide anything toward an exhibit, but what the State did not do, some of its progressive people did, and as a result the Alabama Building was constructed and in it placed exhibits from some of its leading coal and iron companies, furniture and other manufacturers, and, one of the most instructive, an exhibit by the Alabama Fruit Growing and Winery Association. This latter exhibit, it might be noted, showing what is going to be done as well as what has been done, some of the objects shown being a little premature. Georgia and Alabama have the only buildings on the grounds erected to represent Southern States, but, unlike Alabama, the Georgia Building was constructed by State aid, and is filled with exhibits provided by the counties and the State. It makes a wonderfully fine showing, especially by comparison with what the other States have done, and it is no wonder that Northern visitors who examined it and then saw the building exhibits erected by the Georgia manufacturers went away impressed with the idea that while the South was a great country, Georgia was the greatest and most progressive State in it.

Louisiana was represented in the Agricultural Building by a remarkably fine collection from the experiment station at Audubon Park, and in completeness of arrangement is unquestionably the most thorough State exhibit on the grounds. Everything was clearly marked, and the various subjects systematically arranged. This exhibit embraced the tobacco, a large panel containing the silky ramie fibre and various products woven from it, including lace, ramie plush, netting, upholstering cloths, imitation silk, towels, imitation linen duck, imitation flax thread and cloth for gentlemen's clothes made from ramie and wool. There were also numerous varieties of oranges, fifty-one varieties of sweet potatoes and a number of fibre plants. Another part of the exhibit shows seventy-five varieties of sugar-cane, sixty varieties of cotton, 150 varieties of Irish potatoes, thirty-eight varieties of cow-peas and twenty-four varieties of white corn. In another part of the exhibit was shown varieties of the woods of Louisiana, some finished and some in the rough, including an artistic mantle-piece made by C. W. Georges & Co., of New Iberia, from Louisiana red cypress. Another instructive part of the exhibit was a case containing cotton, with the New Orleans classification marked with each grade, as follows: Strict good middling, fair, strict middling, middling fair, good middling, middling, low middling and strict low middling. Sixty varieties of cotton are shown, embracing both domestic and foreign, from the experiment station, and other cases containing domestic cotton of especially long staple. New Orleans manufacturers displayed their products across the aisle from this exhibit, showing a variety of the manufactures of that city, among them ginned cypress moss, a large display of rock salt from New Iberia, including a salt statue of Lot's wife, oils, flavoring extracts, liquors, cigars and other forms of tobacco, candies, pickles, canned meats and vegetables and other groceries; a display of the various grades of sugar, corks from the Southern Cork Works, saddles from the Whitney & Sloo Co., of New Orleans, and other products.

Texas sent a car of its products, one similar to that which went all through the country some years ago, stopping at all the county and State fairs. This, with a small exhibit in the Forestry Building, was all the big State could do. The only really creditable mineral display from any State was that made by North Carolina, which, while largely of cabinet specimens, was thorough both in its arrangement and variety of specimens shown. Georgia had a good display in the State building, but even there the Polk county exhibit was more complete. The exhibits of the other States were scattering, and lacked completeness and proper arrangement. Had Alabama given the support which it should have, a mineral exhibit might have been prepared which would have been worthy of a State mining 2,000,000 tons of iron ore and 5,000,000 tons of coal each year.

All of the States could have done better, and should have given a substantial appropriation to erect exhibits worthy of them. It is difficult to find any name for a policy which is too narrow to see the necessity for this. There must be some disease associated with State politics which enervates the mind and brings on obliquity of judgment.

But of the exposition. The manner in which the work was carried out reflects great credit upon those who were engaged in it. Few of them had any previous experience in matters of this kind, and could not be expected to foresee and forestall all of the difficulties which were to arise during its progress. That there were so few of these shows how carefully considered was each part of the work, and the attention given to its many details. There was one department, however, which does not seem to be entitled to the high praise due to the others, and which, had it not been for the uniform courtesy and activity of certain of its employees, notably its chief clerk, would long ago have come into open conflict with a large number of the exhibitors and concessionaires. Naturally a department having constant relations with those in charge of exhibits and concessions has an immense amount of detail work to attend to. It is asked for favors which it is impossible to grant, and blamed for rules and restrictions for which it is not in any way responsible. Further, it must prevent any attempts to evade contracts, and in this way also arouses ill-feeling. But even these things do not account for the very general dislike expressed for the management of the department. Certain of the leading exhibitors have stated regarding this, that they have been treated with "uniform discourtesy," and some others make even stronger statements. There have been complaints, too, from gentlemen in some of the foreign exhibits, and many from among the concessionaires. As an instance of the ruling of this department one instance might be mentioned. A gentleman who came to Atlanta to make preparations for the lodging and reception of a party of nearly 2000 visitors from a distant city, after spending the day busily, found it necessary to call upon a gentleman in the exposition grounds. On coming out his carriage was refused admittance unless a payment of several dollars was made. The facts that he would be within the grounds only a few minutes, and that his work was directly to benefit the exposition had no weight. A still further and somewhat more serious instance is described as follows in the Atlanta Journal of December 13:

"A warrant charging E. A. Felder, chief of the department of admissions and concessions of the exposition, with assault with intent to murder, has been

sworn out in the court of Justice Bloodworth. The case against Mr. Felder was caused by some trouble which he had recently with one of the concessionaires, a man named Fischel, in the Forestry Building on the exposition grounds. Hot words were exchanged between the two, and Mr. Felder finally struck the concessionaire with the butt of a pistol."

This puts the incident in a mild light. Mr. Fischel, who has a lapidary exhibit in the Forestry Building, also bought a concession to sell some of his products. He says that after visiting his exhibit at this late day the department concluded that he was not keeping strictly within the terms of the concession, and ordered him to close. The following day his passes and those of his employees were taken up. He immediately laid the matter before Mr. Collier, who called in the chief of the department and adjusted the matter in a few moments. Mr. Fischel then asked for the return of his passes, and the chief of the department struck at him, then drew a revolver and was only prevented from shooting by some bystanders. A warrant was sworn out, and after some delay Mr. Fischel allowed the matter to drop upon the payment of costs and an apology, with the assurance that he would not be further molested. Why, it is pertinent to ask, does the chief of a department happen to be going around with a revolver in his pocket?

Very much more might be said of matters of this kind. The selection of a chief was an unfortunate one in many ways, and it is to be hoped that in the coming expositions at Nashville and Baltimore a more judicious appointment may be made.

There are other things here from which useful lessons may be taken. For instance, the method adopted for making walks. Crushed stone is good in its way, but unless kept continually rolled and built in some kind of foundation it is about the worst material that could have been selected. Where there was continual travel the stone was pressed into the clay beneath, and after a rain this path was too muddy to use, compelling the pedestrian to walk over the rough rock. Again, the number of places of public comfort was far too small. This was given out as a "concession" and but five established. At the beginning there were but two, then another, and finally two more were added. This was far less than was necessary, and but little effort was made to make their whereabouts known until the exposition was half over. Another trouble has been in the scarcity of watchmen in many of the buildings. As a result of this there were a number of thefts, some of the objects stolen being so bulky that it is a matter of wonder how it was possible to have removed them without the knowledge of the watchman. In the matter of hotel accommodations there was room for much complaint at the beginning, but later, as was suggested in these columns, the daily papers published a list of some of the leading hotels, and the various bureaus and individuals who represented boarding and lodging houses took measures to make themselves known. While in the majority of cases the prices charged were not unduly high, in some they were so far beyond the worth of the accommodations offered as to be extortionate in every sense of the word. The lack of proper terminal facilities at the Union Depot has before been referred to. Not only were the depot and yards too small to handle the trains properly, but the crowds were so great at times that it was almost impossible to get through them to the gates or the trains. Sneak thieves reaped a harvest, but only a small number were caught.

The method of making awards has been referred to several times in these columns. It was probably as satisfactory as that adopted at Chicago, which was notoriously bad, and awards made under it are not necessarily regarded as recognition of true merit. It does not seem an impossible thing to so arrange a system of awards that each has a distinctive meaning. Where an exhibit is entered for competition with others of the same character, it is not enough that the jury should simply look at each, without making any tests of efficiency. Further, awards should be based only upon the exhibits within the grounds and without regard to others manufactured and not shown. The juries should judge the relative merit of the things shown, not comparing them with manufactures the producers of which did not show sufficient interest to make a display. Of course, no system could be worked out which would please everyone, but there is no apparent reason why a just method cannot be evolved and awards made by competent men. Any exposition that does this will win an enviable and lasting reputation.

The exposition company arranged for the disposition of exhibits in a rather autocratic manner. A letter was issued to all exhibitors, notifying them that none but the Atlanta Baggage & Cab Co. could remove exhibits from their grounds, as the sole concession had been sold to them. The matter of charges is left apparently with this company, and as it has the sole right, there is no reason for supposing that they will be small, or that the company will be anyway prompt in its work. The exposition authorities probably forgot that their contracts with exhibitors terminated on December 31, and after that time the latter could easily, by application to court, carry away their goods on wagons of their own selection. It seems to me that this is a rather small way to try and squeeze money from those who have been as interested as the directors in making the show a success.

The exposition sold concessions for everything imaginable, useful and useless. Many of its officers were owners in whole or part of a number of concessions, a rather questionable policy it seems to me. The public comfort matter could be better handled by expositions themselves and not sold. On the lake the concession was granted to the electric launches, and other boats could not be used without the payment of a considerable sum. This would prove a distinct disadvantage were many different makes of boats exhibited. Again, like Chicago, the photographic concession was sold. This is poor policy, since it prevents amateurs from taking views, which they afterwards show to their friends and advertise the exposition just so much. In many other things mistakes were made, and it would be well for the Nashville and Baltimore exposition directors to take lesson by the faults here—as well as the good—so that their work may be an improvement on this.

There is one more thing to which I want to refer: that is the absurdity of any company making an extensive display of its products without also keeping a man there who can tell about them and—as may often happen—take orders. There is not a building on the grounds but that has some interesting exhibits without a representative. Others have representatives who consider it beneath their dignity to explain to any but a favored few, but the number of these is small. The exhibits which always attracted most attention, without regard to their size, were those where the person in charge was always ready and willing to explain, without always waiting to be asked. At some places there was a con-

stantly changing crowd, asking questions and listening. Those were the ones which benefited themselves most.

The Nicaragua Canal has aroused so much interest in this country that the topographical model in the Transportation Building has never been without visitors. There is shown here a model about twenty-five feet long giving a section of the country on either side of the proposed canal, showing the route which the canal will take, the mountains on either side and the position of the locks and dams, as well as the harbors on both the Atlantic and Pacific oceans. No better means than this could possibly have been found for instructing the people as to just what was proposed to accomplish by the canal, and how it was to be done. Further, the model is a correct one in showing the elevations, and to add to its intelligibility, the lakes, rivers and oceans are filled with water, thus showing the shore lines in the latter, and the size and amount of territory overflowed by the latter through the construction of the canal. It is unnecessary here to say anything of the importance of this project, but the model emphasizes what has been said by the commissioners here from Costa Rica, of the great development which would result in their country and Nicaragua. American enterprise and capital have there a vast field, comparatively untouched, which would readily respond to their efforts. Not only will there be the direct results coming from actual investment, but the indirect, though none the less important one, from the trade resulting in the purchase of American machinery and supplies. The model shows only the geographical features of the country, but supplements this by printed matter regarding the canal.

A feature of the exposition which, in its working hours, has attracted many visitors, has been the model cotton gin and compress erected in the rear of Machinery Hall by the Walburn-Svenson Co., of Chicago. The cotton gins are the usual style of saw gins, but the cotton passing from them is blown into a large condenser, from which it passes in a sheet over a moving table to a core between two rolls. This forms the round bale, which has been fully described in the Manufacturers' Record. It will be remembered that there are three forms of round bale presses now made—one, the Walburn-Svenson, and another the Besonette, both making a bale about four and one-half feet long and two feet in diameter, covered with cotton duck; the third is the Anderson press, which makes a bale about thirty inches high and of the same diameter, the covering being sheet iron. All of these presses aim at the same thing—to secure the greatest possible density, and to take seed cotton from the farmer and turn out a compressed bale, instead of the present method of ginning and baling and then compressing the bale at the nearest compress market. These machines all have automatic samplers, so the losses from excessive sampling at warehouses is avoided, as well as loss from dirty cotton, as these bales are thoroughly covered. It must be remembered, however, that the introduction of these presses will mean practically the extinction of the cotton factors' business, placing it in the hands of the owners of the compresses. In any event, there can be no question but that cotton in some such shape is far better fitted for the market and more advantageous to the planter than the present extravagantly wasteful system, as it will reduce losses, cost of insurance, storage and handling, besides giving a cleaner and more regular product. "Packed" bales will be more difficult to make and also harder to detect,

but the average will be better. The plan of the Cotton Ginners' Compress Co., which controls the Walburn-Swenson machine, is understood to be the erection in good districts of a gin and compress, retaining for itself 51 per cent. of the stock and selling the remainder. This can be

can be regulated in a moment from the full 125 horse-power to 100 or seventy-five, the revolutions being correspondingly reduced from 300 to 275 or 250. Its action is not only extremely sensitive, but has also the advantage of being simple and reliable at all times.

here effectively done. The figures are in life size, and while they appear a trifle crowded, the work is so well executed that this is not noticed unless the picture is carefully studied.

The new model automatic weighing machine exhibited in Machinery Hall by the Pratt & Whitney Co., of Hartford, Conn., is an interesting piece of mechanism. The purpose of this machine is to record automatically the weight of grain or other substance. In flour mills this is extremely important, as it keeps a record of all grain used and shows, by comparison with the weight of the product, how much loss there is. By this means the mill account may be accurately kept. The old-style weighing machine made by this company gave excellent work, but this new one has several important improvements which make it more sensitive and accurate, and at the same time substantial and not liable to get out of order.

The Thompson Meter Co., of Brooklyn, N. Y., has an exhibit in the Manufactures and Liberal Arts Building in which it shows a number of its water meters of various sizes, from one-quarter of an inch to four-inch pipe. The construction of these meters is extremely simple, and not liable to get out of order. The amount of

say anything regarding the use of these meters. They are as essential as those used for gas, and their employment always results in saving water by using it to the best advantage. Preventing waste in cities is the most difficult of all water-supply problems, but its solution, after all, is simple—only the introduction of a meter to make each consumer pay for what he alone uses.

The Jenny Electric Motor Co., of Indianapolis, Ind., has in the Electricity Building an interesting display, showing the various sizes of its motors and dynamos, some of which are also in service in Machinery Hall. In the back of the exhibit there is a row of Packard incandescent lamps.

The Plant system has a striking building of pyramid shape, the outside being covered with white rock, and about half way up a row of windows giving light to the interior. Inside there is a large and very fine display of Florida products; its fruits, so widely celebrated, its phosphate rock, vegetables, grains and other products. From Tarpon Springs there is an exhibit of sponges, a handsome green turtle shell, fruits of various kinds and some large cane. There are numerous photographs in the building, showing different points of interest along the Plant system in Florida. An interesting feature of the exhibit is the model of a phosphate mine and the bones of various animals which have been taken from the phosphate deposits. One case shows some of the natural paints of Florida; that is, clays, colored with various mineral oxides. There is also shown some fine pulverent gypsum, containing 92 per cent. of sulphate of lime, from near Ocala. There are samples of refined and crude kaolin from the Palatka Kaolin Co., of Richmond, Fla., and some very beautiful specimens of china manufactured from it, showing the excellent results obtained. This china is an excellent white, and shows no sign of the color which New Jersey potteries say comes from most of the Southern kaolin.

One of the most interesting, and certainly the most instructive, feature of the entire exhibit is a large topographical map of Florida, showing the elevations and depressions, the location of cities, lakes and rivers, the county lines,

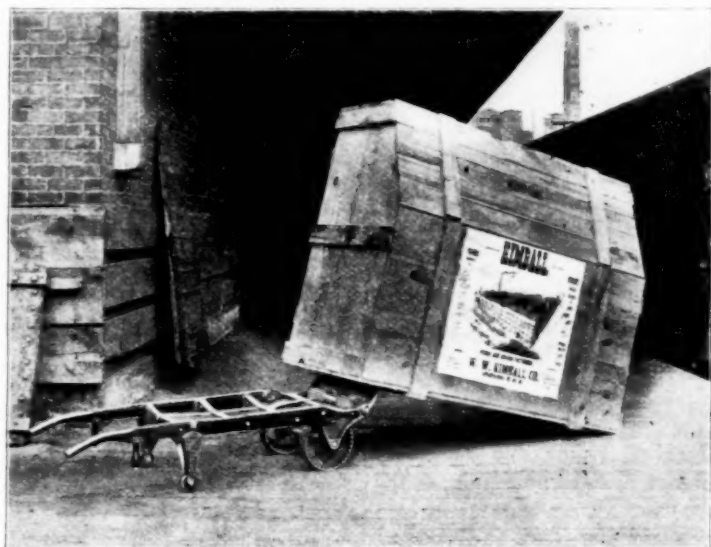


FIG. 1.

easily worked for benefit or harm, which remains to be seen.

The Thomas Automatic Hand Truck Co., of Chicago, has in the Transportation Building an exhibit of its automatic hand trucks, one of the most ingenious devices of this kind that has ever been put on the market. The method of using this truck is shown in the three illustrations accompanying. Cut No. 1 shows the truck after the point has been placed under a heavy case, as in the ordinary truck, and the handles pressed down. In cut No. 2 the truck has been pushed forward, showing that the point folds back, permitting the man handling it to roll the truck still further under the case and bring it in the position shown in cut No. 3. The whole thing is done with very little exertion, compared with the ordinary hand truck, and accomplished a great saving of time and labor in handling heavy weights of this character. The company makes several forms of this truck suitable for different classes of work. The mechanism is extremely simple and not liable to get out of order or be injured by the rough handling which would be experienced around railroads and warehouses. Among the different forms made is one consisting entirely of malleable iron, which weighs altogether 150 pounds; this is made for the heaviest kind of work on steamship wharves and at similar places.

The Standard Wheel Works, of Philadelphia, has in the Transportation Building an exhibit of its steel-faced car wheels. The exhibit shows both the open and solid wheel, besides one cut to show a section of the wheel, showing the steel tire and cast hub and spokes.

The Ball Engine Co., of Erie, Pa., has in Machinery Hall one of its high-speed horizontal engines, with 13-inch steam cylinder and 15-inch stroke, running 300 revolutions a minute and driving a Brush 120-arc-light dynamo. This engine develops 125 horse-power at 100 pounds steam, and in severe tests made has shown a surprising sensitiveness with decreased or increased duty. The action of the governor is almost instantaneous, one revolution making a change from full service to no work. The engine itself is simple, compact and solid, every piece of work on it being thoroughly finished. The governor, which is set in the flywheel,

The American Engine Co., of Bound Brook, N. J., has in Machinery Hall, driving a large Thomson-Houston dynamo, one of its single-valve engines. This engine is interesting from a mechanical as well as practical point. The engine shown here is a vertical cross-compound, the high-pressure cylinder being nine inches diameter, low pressure fifteen inches, and 12-inch stroke. Its peculiarity is in the valve motion, which is up and down, as in a slide valve, the motion being given by eccentrics, and at the same time a rotary motion communicated through an arm attached to an ingenious eccentric on the end of the shaft. This latter is controlled by the governor, which is placed within the rim of the wheel. The motion is smooth, but what its economy or results in service are could not be ascertained, as the exhibitors have taken no engine diagrams here, nor is their representative sufficiently familiar with the subject to be able to explain.

The Artistic Glass-Painting Co., of Cincinnati, Ohio, shows in the Manufactures and Liberal Arts Building a very beautiful specimen of its art work in illuminated windows. The picture shows Christ receiving little children, and both the drawing and coloring are unusually good for this class of work. The distance, so rarely secured in window painting, is



FIG. 2.



FIG. 3.

water passing through is registered in a dial on the top, covered by a brass cap, in which are the smaller ones, recording one foot, ten feet, 100 feet, 1000 feet, 10,000 feet and 100,000 in the small sizes of meters, and in the larger ones commencing with 100 feet and running up to 100,000,000. It is hardly necessary here to

the lines of railroads, of canals and, in fact, all other features in the State. It gives a bird's-eye view of the State, and shows better than could any geographical map the condition of the country, impressing them upon the mind so that they will always be remembered.

H. S. FLEMING, M. E.

THE NICARAGUAN CANAL.

Views of a Prominent Contractor.

London, December 12.

Editor Manufacturers' Record:

Replying to your letter of November 14, sent to Chicago, I beg to say that I must refer you to the Nicaragua Company for information as to negotiations in London.

I think I may, however, say this much, that the publication of parts of the report of the United States commission to examine the route of the canal has not stopped the negotiations here, although the publication of parts of the report unfavorable to the enterprise, in advance of the publication of the whole, gives the enemies of the present enterprise a decided advantage over its friends, as no answer to the report can be properly made until the whole report is published. I believe those who are familiar with the enterprise have not had their opinions much changed by what they have been thus far able to read of the report. It would seem that the commission, in their desire to put themselves on the safe side, have been unreasonably cautious. The time at their disposal was, of course, entirely inadequate for making an independent estimate of cost. Assuming, as the commission did, for the purpose of making their estimate, that the surveys so far made are substantially correct, I am quite of the opinion now, as I have been for two or three years past, that a competent contractor could build the canal complete, so as to pass a ship drawing twenty-seven or twenty-eight feet of water, from the Atlantic to the Pacific, for \$100,000,000, and have a large margin of profit.

It happens that a gentleman who is now prominent in financial affairs in London was formerly an active civil engineer, and thirty years ago made a survey for a railway line from the east bank of Lake Nicaragua to a point on the Caribbean sea only a few miles north of San Juan del Norte. He was in that country for many months, and knows very well the climate and physical characteristics of the San Juan valley. That experience of his is now an advantage to the enterprise.

The commission questions the practicability of the "rock-fill" dam at Ochoa, and, I believe, raises the cost of it from about \$300,000 to \$4,000,000. Apparently, the commission consider the Ochoa dam as the most serious and difficult problem of the whole canal. Those of the public who are not civil engineers, and who take an interest in the canal, should bear in mind the difference between a "rock-fill" dam and other dams. A "rock-fill" dam depends wholly on its mass and weight for its stability. The question of its foundation need not be discussed at all, as though a masonry structure was to be erected. I believe the Canal Company knows pretty well what the bottom of the river is at Ochoa, and that there is not more than twenty-five feet of sand, cobblestones and boulders above the hard clay and rock, but it makes practically little difference whether there is twenty feet or 100 feet of loose material above the hard bottom. A "rock-fill" dam will by its own weight and the action of the water go to the hard bottom, and the only question really to be considered is that of the quantity of material to be put in. In the case of the Ochoa dam, there is practically an unlimited quantity of rock and tough, heavy clay to be excavated from the eastern divide cut. This must be loaded onto cars, and then either deposited in waste banks or hauled a few miles further and put into the embankment south of the San Francisco basin, and into the Ochoa

dam. If one-quarter of the rock in the big cut should be put in the Ochoa dam, whether there is twenty or 100 feet of loose material above the hard bottom, I believe there is hardly an engineer of experience in America who would not say that the dam so built would be as permanent as the banks of the river above it. The base of the dam might be 700 or 800 feet wide, or even more, and the slope on the lower side one to five or six, or whatever flatter slope the material would take from the action of the water. The same reasoning can be applied to the Tola dam, on the western division, which will be even larger than the Ochoa dam. A dam like a natural hill can be built in both cases.

The use of temporary trestles or cantilever cranes or cable-conveying plants will make the disposition of the material in the dam little more expensive than putting it in waste banks.

I have no doubt of the substantial accuracy of the surveys, nor of the sufficiency of the borings. I have met in Nicaragua at different times many of the chiefs of parties who did the instrumental work for the present company, and have seen them at their work in Nicaragua. They were mostly energetic and enthusiastic young men, fully competent to perform the duties assigned to them. I can see no reason for assuming a strong possibility of inaccuracy in the transit and level work or in the computations of quantities. The chief elements of cost, then, must be pretty well known. If the Canal Company should wait until every detail of construction were absolutely determined in advance before construction commenced, it is certain that the canal would never be built, or if built, it would cost far more than necessary. The same might be said of a railroad in the United States. There will always be some uncertainties as to details of construction and as to cost until the questions are worked out on the ground.

C. P. TREAT.

Industrial and Railroad New from Kentucky.

[Special Cor. Manufacturers' Record.]
Ashland, Ky., December 28.

The Ashland Coal & Iron Railway Co. purchased last Friday from the Means & Russell Iron Co. a trifle over 6000 acres of fine coal land in this county, most of which lies within two or three miles of the city. It is understood that the purchasers will at an early date begin the development of the land and place at the start one mine adjacent to the line of the Ashland Coal & Iron Railway. The product of the mine will be used to supply the local industries which the company is gradually taking under its management.

Capt. F. A. Stacey, of Chillicothe, Ohio, with J. P. Deiter, a Chicago coal man, has purchased in the neighborhood of 10,000 acres of the finest cannel coal land in Johnson county, Kentucky, lying along Greasy creek, some distance below Paintsville. The land was formerly owned by J. D. Rittenhouse and Mrs. H. C. Gilman. The price paid was \$25 per acre. The newcomers announce that they will immediately build tramways from the site of the proposed mines to the Big Sandy river, and will prepare to ship the coal to the Ohio river and thence to market entirely by water. This mode of shipment was successfully employed, but on a slight scale, years ago by the Peach Orchard Coal Co., still operating at that point in Lawrence county, but now shipping entirely via the Ohio & Big Sandy branch of the Chesapeake & Ohio Railway.

A syndicate of Michigan capitalists have secured a large and very rich area of coal and timber lands in Estill county,

and now have a corps of engineers engaged in locating a line that will penetrate the territory via Irvine, Beattyville and Livingstone to connect with the Chesapeake & Ohio Railway.

A syndicate of Cleveland, Ohio, capitalists have lately secured the charter held by Ashland, Ky., parties for a railroad bridge at that point, and will build a bridge to connect Ironton and Ashland, with accommodations for steam railways, street car line and wagonways. They expect to open by this bridge a way for the Cincinnati, Portsmouth & Virginia Railway, the Baltimore & Ohio, Southwestern, the Chicago, Hamilton & Dayton and the Norfolk & Western Railroad to get into Kentucky, heretofore forbidden territory to them all. From the other side, the Ohio River Railroad, the Ohio & Big Sandy, the Chesapeake & Ohio, the Virginias Railway and the Charleston, Cincinnati & Chicago Railway, the latter projected only at present, are all offered Ohio connection for the West, South and North. The project promises to be one of the best paying that has been brought out in that country in years past, and at present the backers of the scheme are making all possible rush with the preliminary work of surveys, etc., to enable the construction of the bridge to go on at the earliest possible moment. Some of the men interested are Major Saml. Bigstaff, of Covington, Ky.; J. J. Shipyard, and J. W. Dennan, of Cleveland, Ohio, and James and Robert Orr, of Pittsburg, Pa. A number of Cincinnati people are also in the deal, while the Chesapeake & Ohio Railroad is credited with having an interest.

President Ingalls, of the Chesapeake & Ohio road, stated a month ago to Ashland, Ky., parties that their Ohio & Big Sandy division, reaching from Ashland to Peach Orchard, Ky., was to be extended in the spring to the coalfields of the upper Big Sandy valley, mainly the Elkhorn region of Pike county. The intention is to work the mines themselves and also to control the coke output of the country.

The coal of this field has been proven by actual tests to be unsurpassed as a coking coal, and as the veins vary in thickness from four to eleven feet, the possibilities of the field can be seen at a glance. Mr. Ingalls is enthusiastic upon the future of that section from the Big Sandy river to as far as the mouth of Little Sandy on the Ohio river, and states that it will enjoy the cheapest fuel of any point in the entire three adjoining States, and that the outlook for additional iron-working plants in consequence is most flattering.

It is rumored, although the officials of neither plant will make any statement in the matter, that the Ashland Coal & Iron Railway Co. is soon to take charge of the steel plant of the Ashland Steel Co. As the Ashland Coal & Iron Company has two furnaces that could be put on the cheap production of Bessemer pig iron, which is now secured by the steel company at rather heavy cost, they would be in good shape to push the work to success.

Definite developments will probably follow the first of the year. The plant has lately been making about half time.

Conditions Not Equalled Elsewhere on this Continent.

Alexander C. Soper, president Soper Lumber Co., of Chicago, in a letter to the editor of the Manufacturers' Record, says: "I have studied the conditions in Georgia for over five years now, and have no hesitation in saying that I regard the opportunities there for investment as today superior to any that are

offered in any other State in the Union. The low price of lands, coupled with the easy access to the markets of the world via the ocean ports, make conditions which are not equalled anywhere else on this continent. I am sanguine that in the next few years we shall see a great growth in this particular State of the South."

A LARGE POWER STATION.

Edison Electric Co.'s Baltimore Plant to Cost Over \$500,000.

The Manufacturers' Record learns on good authority that arrangements are being made for the construction of the electric plant at Baltimore referred to in this paper last week. The plant will have a power of 5000 horse-power as a minimum. The station will contain what is termed the Edison low-tension system, and will be equipped with the most modern apparatus.

The new station will not be in the neighborhood of the present power-house on West Pratt street, but in another part of the city. It is expected to cost over \$500,000. The Edison Electric Illuminating Co., which is to build it, has Alfred A. Glazier as its president; E. S. Webster, vice-president, and J. Frank Morrison, manager, with \$1,770,000 capital.

A West Virginia Natural Gas Line.

The Philadelphia Natural Gas Co., of Pittsburg, has nearly completed what is conceded to be the longest and largest gas line in the world. When finished it will give that concern over 1000 miles of pipe line and will also give it the distinction of being the largest gas company in America. The new line is 101 miles long and penetrates the gas fields of West Virginia. When completed it will represent an outlay of nearly \$2,000,000, and has given constant employment for a long time to nearly 1000 men. Through this line the Philadelphia Natural Gas Co. expects to largely increase its supply of gas for Pittsburg consumers. The Pittsburg end of the line was started some time ago, and a 36-inch pipe was laid for fourteen miles at a cost of nearly \$1,000,000. The size of the conduit, and the fact that the pipe was laid more than four feet beneath the surface of the ground, explains the great cost and the long time consumed to complete it. The second section is made of 20-inch pipe and is but five miles long. Some little difficulty was experienced in the laying and considerable time was required. The last section is over eighty-two miles in length, and extends over the mountains into West Virginia to the gas wells in Wetzel and Tyler counties. The line runs southwest through Waynesburg, Pa., and crosses the Baltimore & Ohio Railroad at Littleton, W. Va., making thirty-eight miles of line in that State. Considerable difficulty was found in crossing the mountains, not only in laying the line below the surface, but in hauling heavy pipe up the rough mountain sides and over improvised roads for that purpose. Over forty-eight miles of the line are now in use, the gas from the Greene county wells having recently been turned into the pipes. The Philadelphia Natural Gas Co. recently drilled in a well in the West Virginia field which has been flowing gas at a pressure of 300 pounds. The concern has a large amount of territory leased, and expects to turn the gas into the line by the middle of January, when the entire work is expected to have been completed.—Iron Age.

If you wish to keep posted on the progress of the South, read the Manufacturers' Record. Price \$4.00 a year.